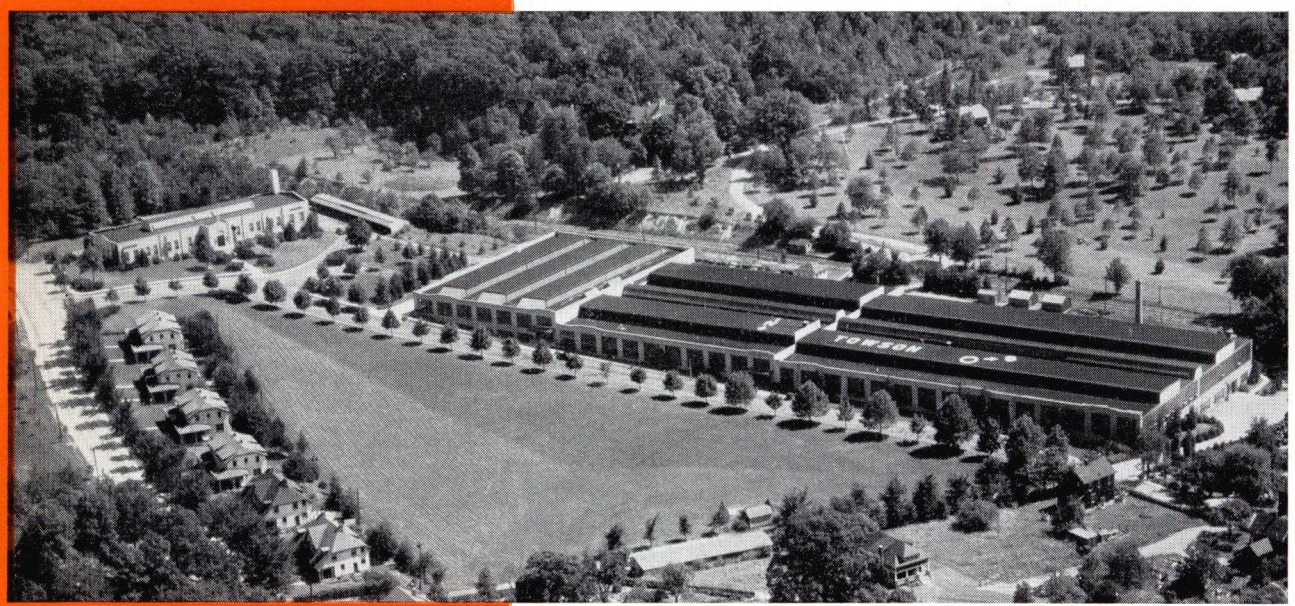
SPECIAL 1/2" DRILL
BLACK & DECKER
★ PORTABLE ELECTRIC TOOLS ★
★ THE FIRST CHOICE OF TOOL BUYERS ★
THE WORLD OVER
1938

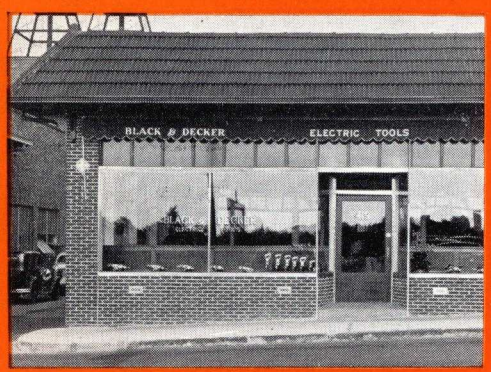
BLACK & DECKER



"ELECTRIC TOOL HEADQUARTERS," FACTORY AND MAIN OFFICES, TOWSON, MD.

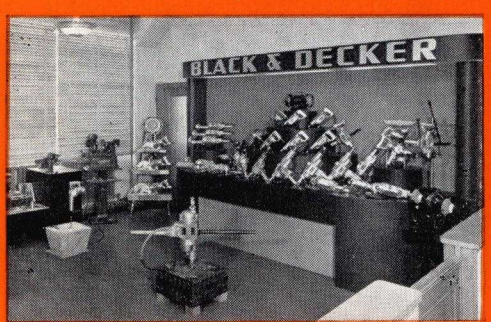
IN a modern plant at Towson, Maryland, equipped with up-to-the-minute production methods, a skilled and co-ordinated group of engineers, machinists and production experts build the famous Black & Decker line of portable electric tools.

In 28 years of electric tool development, we have always been able to offer you, through your automotive, electrical, hardware, machinery, mill supply or plumbing jobber, products of finest quality at reasonable prices, backed by a fair guarantee and the most complete and convenient merchandising organization ever set up to serve electric tool users.



A TYPICAL SALES AND SERVICE BRANCH (ATLANTA, GA.)

Any mechanical product will eventually show wear and need service attention—and when this occurs, "the factory" is too far away to avoid serious delays in having the tool put in working condition. To assure you prompt, efficient service on Black & Decker Products, we operate 25 Factory Service Branches at strategic points throughout the United States and Canada. These Service Branches are manned by Factory trained personnel and equipped with genuine Black & Decker service and replacement parts. Thus, when you need "factory service," for a minor adjustment or a major repair, you will find a Black & Decker Factory Service Branch within 24 hours of you, ready to give you every attention you would receive at Towson.



COMPLETE WORKING DISPLAY MAINTAINED AT ALL BRANCHES (NEW YORK CITY)

At these Factory Branches you will also find a complete display of latest Black & Decker Products, and experienced Sales Representatives will be glad to help you solve your electric tool problems.

Use Black & Decker—through your jobber—at Towson—or at one of the Factory Branches—as

ELECTRIC TOOL HEADQUARTERS

OCT 7 1938

BLACK & DECKER

WEST COAST WAREHOUSE, SALES AND SERVICE BRANCH, OAKLAND, CALIF.

BLACK & DECKER
FACTORY SERVICE BRANCHES

Albany, N. Y.	483 Washington Ave.
Atlanta, Ga.	419 Spring St., N. W.
Boston, Mass.	60 Brookline Ave.
Buffalo, N. Y.	17 E. Utica St.
Chicago, Ill.	2009 S. Michigan Ave.
Cleveland, Ohio	21st at Carnegie Ave.
Dallas, Texas	213 Henry St.
Denver, Colo.	708 Eighteenth St.
Detroit, Mich.	2818 E. Grand Blvd.
Indianapolis, Ind.	935 N. Illinois St.
Kansas City, Mo.	2008 Grand Ave.
Los Angeles, Calif.	2037 S. Flower Street
Memphis, Tenn.	403 Madison Ave.
Minneapolis, Minn.	1012 Marquette Ave.
New Orleans, La.	630 Baronne St.
New York, N. Y.	155 Sixth Ave.
Oakland, Calif.	545 E. 10th St.
Philadelphia, Pa.	710 N. 16th St.
Pittsburgh, Pa.	6030 Broad St.
San Francisco, Calif.	349 Ninth Street
Seattle, Wash.	131 Dexter Ave.
St. Louis, Mo.	2822 Locust St.
Towson, Md.	Pennsylvania Ave.

BLACK & DECKER MFG. CO., LTD.
Rail & Harbour Terminals Bldg.
Toronto, 2, Canada

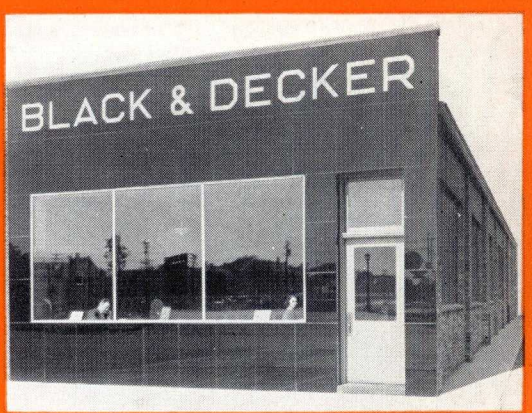
920 St. Sophie Lane
Lyman Tube Bldg.
Montreal, Quebec, Canada

BLACK & DECKER, LTD.
Slough Trading Estate
Slough, Bucks., England

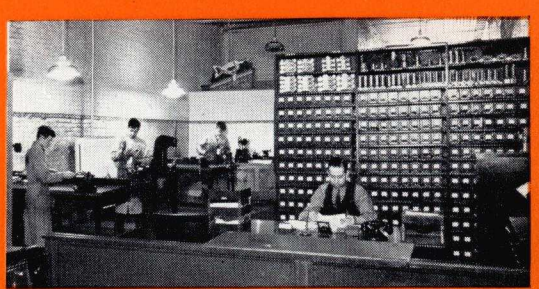
BLACK & DECKER (A'ASIA), PTY., LTD.
Moore House, Circular Quay West,
Sydney, Australia

The Black & Decker Guarantee

"Every electric tool has been carefully inspected before shipment, and we guarantee to replace any defect due to faulty material or workmanship. Our obligation assumed under this guarantee is limited to making replacement of any part or parts returned to us at our factory, or to our authorized service stations, transportation charges prepaid, which prove to our satisfaction upon examination to have been defective and which have not been misused or carelessly handled. We reserve the right to decline responsibility where repairs have been made or attempted by others. This guarantee is in lieu of any other liability on our electric tools or parts. None other is authorized."

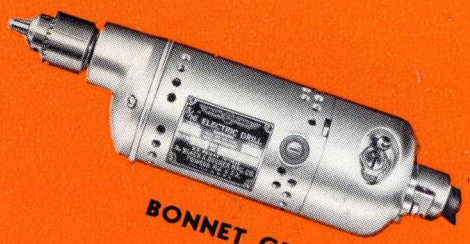


A MODERN BRANCH OFFICE SALES AND SERVICE (CLEVELAND, OHIO)

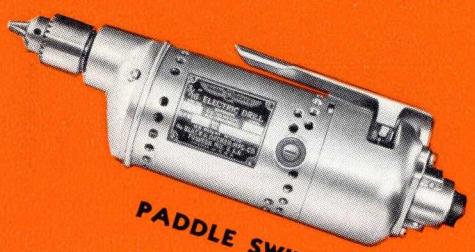


COMPLETE STOCKS OF PARTS AND EFFICIENT SERVICE MEN AT ALL BRANCHES (CHICAGO, ILL.)

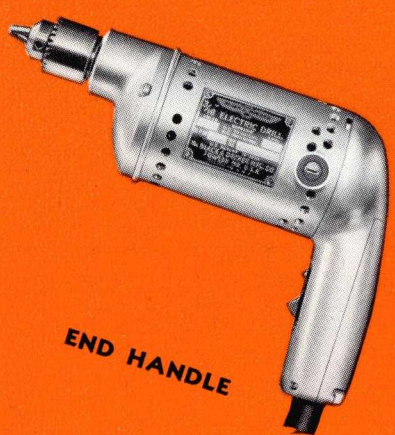
BLACK & DECKER



BONNET GRIP



PADDLE SWITCH



END HANDLE

SIDE HANDLE

3/16-Inch Ball-Bearing Electric Drill

A MOST adaptable production tool for high speed drilling applications. Unusually light and compact; can be used in the smallest and most restricted working areas. Four handle styles adapt this drill to practically any problem of working in hard-to-reach places. Longest "reach" is obtained with end handle type; tumbler switch in handle. Bonnet Grip type is best for working between obstructions or in close corners. Switch is located in bonnet.

The bonnet grip with paddle switch enables operator to grasp unit around field case, automatically compressing the paddle which throws switch to ON position; as tool is released, a spring returns switch and paddle to normal OFF position.

Where there are no obstructions to free use of the drill, the best balance and working conditions are obtained with side handle. Equipped with automatic-release trigger switch.

Ball bearings on armature shaft and chuck spindle.

Especially adapted to radio, refrigerator and other cabinet work, automobile body and trim assembly, airplane assembly, stainless steel coach work.

Specifications

BONNET GRIP—Capacity: In steel . . . 3/16"; in hardwood . . . 5/16"
Speed: No-load . . . 3000 R.P.M.; Full-load . . . 2000 R.P.M.
Weight: Net . . . 3½ lbs.; Shipping . . . 5 lbs.
Overall length: 9⅞"

Price, complete for all voltages (Code **No. 28**) **$42.00**
Special Speeds, 500 or 1400 R.P.M. $46.00
4000 R.P.M. 44.00

PADDLE SWITCH—Capacity: In steel . . . 3/16"; in hardwood . . . 5/16"
Speed: No-load . . . 3000 R.P.M.; Full-load . . . 2000 R.P.M.
Weight: Net . . . 3¾ lbs.; Shipping . . . 5 lbs.
Overall length: 9⅞"

Price, complete for all voltages (Code **No. 241**) **$45.00**
Special Speeds, 500 or 1400 R.P.M. $49.00
4000 R.P.M. 47.00

SIDE HANDLE—Capacity: In steel . . . 3/16"; in hardwood . . . 5/16"
Speed: No-load . . . 3000 R.P.M.; Full-load . . . 2000 R.P.M.
Weight: Net . . . 3¾ lbs.; Shipping . . . 5 lbs.
Overall length: 8⅛"

Price, complete for all voltages (Code **No. 29**) **$42.00**
Special Speeds, 500 or 1400 R.P.M. $46.00
4000 R.P.M. 44.00

END HANDLE—Capacity: In steel . . . 3/16"; in hardwood . . . 5/16"
Speed: No-load . . . 3000 R.P.M.; Full-load . . . 2000 R.P.M.
Weight: Net . . . 3¾ lbs; Shipping . . . 5 lbs.
Overall length: 9"

Price, complete for all voltages (Code **No. 27**) **$42.00**
Special Speeds, 500 or 1400 R.P.M. $46.00
4000 R.P.M. 44.00

All units furnished complete with 3-conductor cable and plug (3rd wire for grounding); 3-jaw Jacobs chuck and key; Universal motor for either A.C. or D.C.

Standard voltage—110; also available for 220 or 250 volts.

"Shorty" Ball-Bearing Electric Drill

(3/16-Inch and 1/4-Inch Sizes)

A SENSATIONAL new unit, presenting an entirely new principle of electric drill construction. Increased application of power drills to various small-unit production and assembly operations, demands a drill combining ample power, compact design, light weight and the ability to work "around corners."

"SHORTY" meets all these requirements, with a brand-new idea in drill design. The chuck spindle is mounted at right angles to the motor and reduces the overall *working* length of the tool to 4½". The motor housing dimensions have also been reduced to a minimum—so that the tool fits snugly in the operator's hand, and requires no extra handle. Spiral bevel gears are used for full power transmission and smooth operation.

An ingenious ventilating arrangement assures cool motor operation. Deep vents cast in the gear-head provide for free passage of air, even though the tool is grasped by the head. The tapered end of the gear-head extends over the chuck, protecting operator's fingers.

"SHORTY" has been especially designed for "close corner" work, as in aircraft and auto-trim plants; radio and other cabinet work; ornamental iron and structural steel work and as a compact "kit" tool, where size and weight are important considerations.

The unit is ball-bearing equipped throughout and has a universal motor which operates on A.C. or D.C. A removable insulated cap provides easy access to brushes for inspection. Thumb control switch is in the line just back of tool. This unit can also be furnished, at slight extra cost, with toggle switch in the end cap; or with a paddle switch, which makes switch control practically automatic. With these special switches, a cast aluminum end cap is used.

"SHORTY" is available either in 3/16" or 1/4" capacities.

Specifications

3/16" & 1/4" Shorty	Standard Unit Switch-in-line	Unit with Paddle Switch	Unit with Toggle Switch
Weight: Net	3½ lbs.	3⅞ lbs.	3¾ lbs.
Shipping	4½ lbs.	4¾ lbs.	4¾ lbs.
Overall length:			
Direction of chuck spindle	4½"	4½"	4½"
Direction of motor	7¾"	8¾"	8¾"

3/16" Shorty Drill

Capacity: in steel—3/16"; in hardwood—5/16".
Speed: No-load 3700 R.P.M.; Full-load 2300 R.P.M.
Optional Speed: No-load 5000 R.P.M.; Full-load 3200 R.P.M.

Price, Standard switch-in-line (Code No. **25**) **$38.00**
With paddle switch (Code No. **286**) **$41.00**
With toggle switch (Code No. **297**) **41.00**

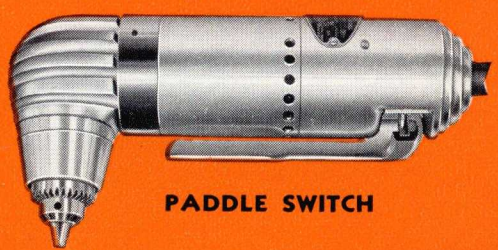
1/4" Shorty Drill

Capacity: in steel—1/4"; in hardwood—1/2".
Speed: No-load 2500 R.P.M.; Full-load 1600 R.P.M.

Price, Standard switch-in-line (Code No. **26**) **$35.00**
With paddle switch (Code No. **287**) **$38.00**
With toggle switch (Code No. **298**) **38.00**

Standard Equipment—3-conductor cable and plug (3rd wire for grounding); thumb control switch in line; Jacobs geared chuck and key; Universal motor for A.C. or D.C.; Removable bakelite end cap to facilitate brush inspection.

Standard Voltage—110; also available for 220 or 250 volts.



PADDLE SWITCH

BLACK & DECKER

1/4-Inch Junior Electric Drill

DEFINITELY styled as a practical "handy" drill, the ¼" Junior proves that a low-priced drill can be a **good** drill.

The housings are rounded to reduce the outer diameter and fit easily in the hand. Its husky aluminum casings will take many hard knocks. Its "Compo" oil-less bearings will give years of smooth operation. Its powerful motor will handle hundreds of "pick-up" drilling jobs in metal and wood.

An ideal drill for the tool kit in maintenance work, plumbing, automotive repair, electrical carpentry and cabinet work, and on the work bench.

Can be used in horizontal stand for light grinding and wire brushing; or in the Bench Drill Stand as a drill press for more accurate work.

Specifications

Capacity: In steel . . . up to ¼"; In hardwood . . . up to ½"
Speed: No-load . . . 1800 R.P.M.; Full-load . . . 1050 R.P.M.
Weight: Net . . . 3⅞ lbs.; Shipping . . . 4¾ lbs.
Overall length . . . 12"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); 3-jaw Jacobs chuck and key; thumb control switch.
Standard Voltage—110; also available for 32, 220 or 250 volts.
Price, complete for all voltages (Code No. **30**) **$19.95**

Universal Motor, operating on either A.C. or D.C.

Attachments and Accessories

No. **119** Bench Drill Stand . **$14.00**
No. **120** Post Drill Stand . **18.00**
No. **8169** Horizontal Stand **1.50**
No. **3071** Arbor for Grinding and Wire Wheels ..... **.85**

1/4-Inch Special Ball-Bearing Drill

DESIGNED to meet the most exacting needs for intermittent service on all types of drilling, and for operating small wire brushes, carbon cleaning tools, etc. Automatic-release switch equipped with thumb latch for optional use. Armature shaft mounted on ball bearings.

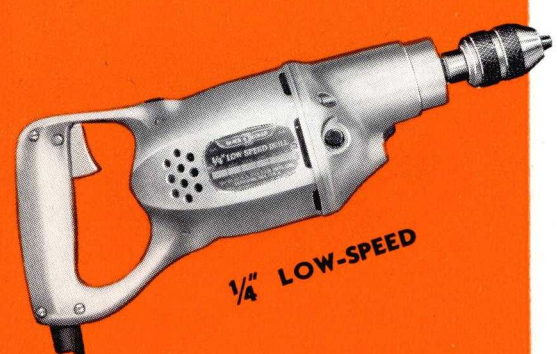
Specifications

Drilling Capacity . . . In steel ¼"; In hardwood ½"
Speed: No-load . . . 2,000 R.P.M.; Full-load . . . 1,350 R.P.M.
Weight: Net . . . 5½ lbs.; Shipping . . . 6¾ lbs.
Overall length . . . 11¾"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); 3-jaw Jacobs chuck and key, automatic-release switch, with thumb latch for optional use.
Optional Equipment—No. **12792** Keyless Chuck instead of Key Chuck ..... **$2.00 extra**
Standard Voltage—110: also available for 32, 220 or 250.
Price, complete for all voltages (Code No. **31**) **$32.50**

Universal Motor Operates on A.C. or D.C.

Attachments and Accessories

No. **14657** Grinding Stand . . **$ 2.75**
No. **119** Bench Drill Stand **14.00**
No. **120** Post Drill Stand . **$18.00**



1/4-Inch Low Speed Ball-Bearing Electric Drill

THIS unit fills the ever-increasing need for an electric drill adapted to stainless steel, Monel and other very hard metals. High-speed electric drills are not suited to this increasingly popular group of metals, often causing burned bits and delaying production.

Triple-reduction gear train provides ample torque for the toughest steel-drilling applications. Armature and spindle mounted on ball-bearings.

Specifications

Drilling Capacity: In steel ¼"; In hardwood ½"
Standard Speed: No-load . . . 450 R.P.M.; Full-load . . . 285 R.P.M.
Weight: Net . . . 6¼ lbs.; Shipping . . . 7¾ lbs.
Overall length: 13"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); "Portomatic" Keyless chuck and patented gear locking pin; instant-release trigger switch with locking pin.
Standard Voltage—110. Also available for 32, 220 or 250 volts.
Price, complete for all voltages (Code No. **237**) **$40.00**
Special Speeds—350 or 600 R.P.M. ..... **extra $2.50**

Attachments and Accessories

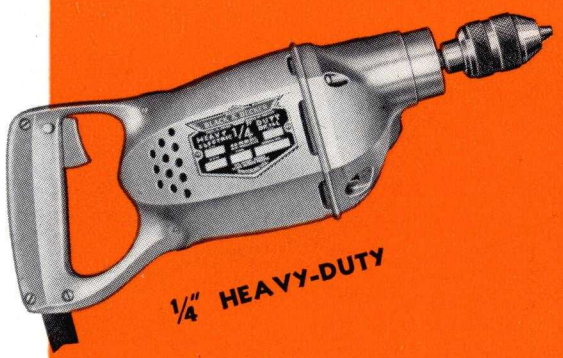
No. **119** Bench Drill Stand . **$14.00**
No. **120** Post Drill Stand . **$18.00**

1/4-Inch Heavy Duty Ball-Bearing Drill

A STURDY, perfectly balanced drill for constant service on production and heavy duty maintenance work. Especially suited to driving Carbon Cleaning Tools. Automatic-release switch equipped with thumb latch for optional use. Armature and chuck mounted on ball bearings.

Specifications

Drilling Capacity . . . ¼" in steel; ½" in hardwood.
Speed: No-load . . . 2,000 R.P.M.; Full-load . . . 1,200 R.P.M.
Weight: Net . . . 7¾ lbs.; Shipping . . . 9 lbs.
Overall length . . . 14½"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); "Portomatic" Keyless chuck and gear locking pin; automatic-release switch with locking pin for optional use.
Standard Voltage—110; also available for 32, 220, or 250.
Price, complete with "Portomatic" Keyless Chuck and patented gear locking pin (Code No. **33**) **$45.00**
Universal Motor Operates on A.C. or D.C.



Attachments and Accessories

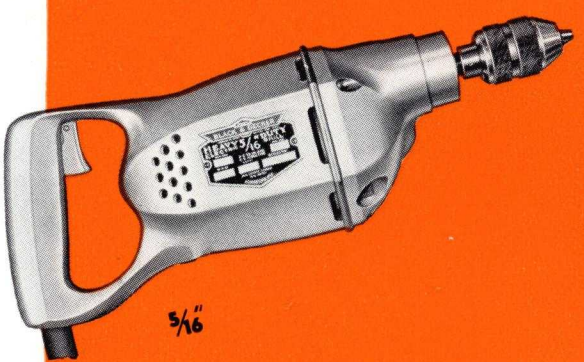
No. **14657** Grinding Stand . . **$ 2.75** No. **120** Post Drill Stand . **$18.00**
No. **119** Bench Drill Stand **14.00**

5/16-Inch Ball-Bearing Drill

DESIGNED for industrial production service on cabinet and body assembly, and especially suited to lead-hole drilling on screw-driving operations. Automatic-release switch equipped with thumb latch for optional use. Armature and chuck spindle mounted on ball bearings.

Specifications

Drilling Capacity . . . 5/16" in steel; ⅝" in hardwood.
Speed: No-load . . . 1,400 R.P.M.; Full-load . . . 850 R.P.M.
Weight: Net . . . 7¾ lbs.; Shipping . . . 9 lbs.
Overall length . . . 14½"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); "Portomatic" Keyless chuck and gear locking pin; automatic-release switch, with locking pin for optional use.
Standard Voltage—110: also available for 32, 220, or 250.
Price, complete, with "Portomatic" Keyless Chuck and patented gear locking pin (Code No. **35**) **$50.00**
Special Speed—900 R.P.M. ..... **$2.50 extra**
Universal Motor, Operates on A.C. or D.C.



Attachments and Accessories

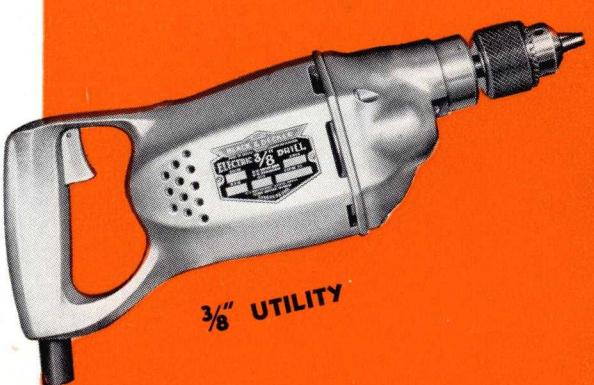
No. **14657** Grinding Stand . . **$ 2.75** No. **120** Post Drill Stand . **$18.00**
No. **119** Bench Drill Stand **14.00**

3/8-Inch Utility Ball-Bearing Drill

A NEW unit developed for industrial users who require a high speed, light weight drill of ⅜" capacity for sheet metal, body and cabinet work. Ideal for new railcar assembly and coach building. Recommended for production service in light material only. Automatic-release switch equipped with thumb latch for optional use. Armature and chuck spindle mounted on ball bearings.

Specifications

Drilling Capacity: In steel . . . ⅜"; in hardwood . . . ⅝"
Speed: No-load . . . 900 R.P.M.; Full-load . . . 575 R.P.M.
Weight: Net . . . 8 lbs.; Shipping . . . 10 lbs.
Overall length . . . 14¾"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); 3-jaw Jacobs chuck and key, automatic-release switch with thumb latch for optional use.
Standard Voltage—110; also available for 32, 220 or 250 volts.
Price, complete for all voltages (Code No. **36**) **$53.00**
Universal Motor, operates on A.C. or D.C.



Attachments and Accessories

No. **14657** Horizontal Drill Stand ..... **$ 2.75** No. **119** Bench Drill Stand . **$14.00**
No. **120** Post Drill Stand . **18.00**

BLACK & DECKER

3/8-Inch Standard Ball-Bearing Drill

DESIGNED for industrial use, in plants where specialized operations call for production drilling of 3/8" holes at high speed. This drill is light, perfectly balanced, amply powered for continuous production service. Armature mounted on ball bearings. Automatic-release trigger switch equipped with locking pin for optional use.

3/8" STANDARD

Specifications

Drilling Capacity: In steel . . . 3/8"; In hardwood . . . 3/4"
Speed: No-load . . . 900 R.P.M.; Full-load . . . 675 R.P.M.
Weight: Net . . . 12¾ lbs.; Shipping . . . 16 lbs.
Overall length . . . 16¾"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); 3-jaw Jacobs chuck with key; automatic-release switch with locking pin for optional use; spade handle with key holder; detachable pipe handle.
Standard Voltage—110; also available for 32, 220 or 250 volts.

Price, complete for all voltages (Code No. 37) **$57.00**

Universal motor operates on A.C. or D.C.

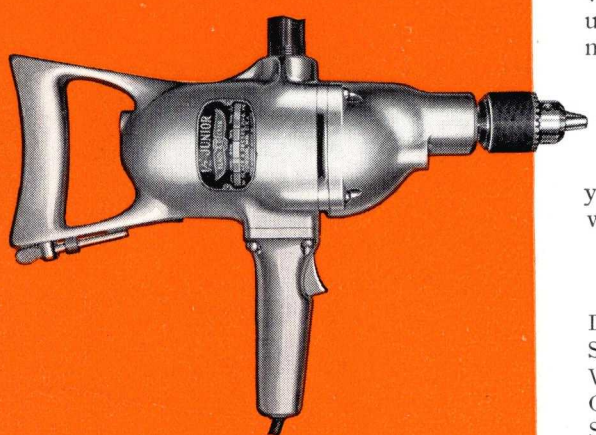
Attachments

No. 122 Bench Drill Stand. **$22.00**
No. 123 Post Drill Stand .. **26.00**
No. 124 Pedestal Drill Stand **$28.00**

1/2-Inch Junior Electric Drill

THE new ½-INCH JUNIOR—priced sensationally low—is definitely designed for the mechanic who needs an "all-around" drill, a drill that can be used in any metal or wood, that will drive various accessories, that can be picked up at any time for odd job use, that has plenty of power for tough drilling and that will meet the varying needs of job-shop routine.

Spindle speed is most practical for an all-purpose tool, correct for drilling in all metals and woods, ideal for driving Hole Saws and wood augers; its aluminum housing will stand up under much hard use; its "Compo" oilless bearings will give years of smooth operation. The rounded housings reduce size and weight, and make the drill easier to handle.



½" JUNIOR

Specifications

Drilling Capacity: In steel . . . up to ½"; In hardwood . . . up to 1"
Speed: No-load . . . 375 R.P.M.; Full-load . . . 240 R.P.M.
Weight: Net . . . 9⅜" lbs.; Shipping . . . 13 lbs.
Overall length . . . 16½"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); 3-jaw Jacobs chuck with key; automatic-release switch with locking pin for optional use; spade handle with chuck-key holder; removable pipe handle.
Standard Voltage—110, also available for 32, 220 or 250 volts.

Price, complete for all voltages (Code No. 38) **$35.00**

Universal Motor, operates on A.C. or D.C.

Attachments and Accessories

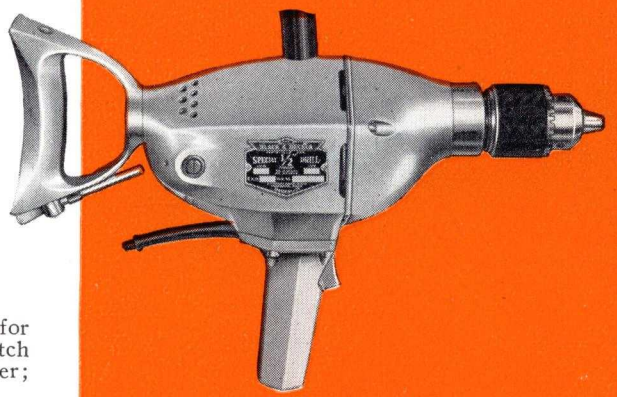
No. 122 Bench Drill Stand. **$22.00**
No. 123 Post Drill Stand . **26.00**
No. 124 Pedestal Drill Stand **28.00**
No. 8449 Wheel Arbor for grinding and wire wheels **$1.75**

See Page 16 for Complete listings of Hole Saws

1/2-Inch Special Ball-Bearing Drill

IN this, the most popular general service drill of the Black & Decker line you will find such features as perfect balance, smooth lines, improved design, lighter weight, increased power and greater service. It is adapted to drilling in all types of material, ideal for driving Hole Saws and for general maintenance and installation work.

Automatic-release trigger switch equipped with locking pin for optional use. New right angle chuck key held securely in special compartment in spade handle. Armature mounted on ball bearings.



½" SPECIAL

Specifications

Drilling Capacity: In steel . . . ½"; In hardwood . . . 1"
Speed: No-load . . . 400 R.P.M.; Full-load . . . 300 R.P.M.
Weight: Net . . . 13¼" lbs.; Shipping . . . 17 lbs.
Overall length . . . 17¼"
Standard Equipment—3-conductor cable with plug (3rd wire for grounding); 3-jaw Jacobs chuck with key; automatic-release switch with locking pin for optional use; spade handle with key holder; detachable pipe handle.
Standard Voltage—110: also available for 32, 220 or 250 volts.

Price, complete for all voltages (Code No. 39) **$58.00**
Universal Motor, operates on A.C. or D.C.

Attachments and Accessories

No. **122** Bench Drill Stand . **$22.00**
No. **123** Post Drill Stand .. **26.00**
No. **124** Pedestal Drill Stand **28.00**
No. **8449** Wheel Arbor for Grinding and Wire Wheels **$1.75**

Hole Saws, up to 3½" (See Page 16)

1/2-Inch Heavy Duty Ball-Bearing Drill

ENTIRELY redesigned, with greater power, better balance and improved anti-friction bearing construction for heavy-duty service. Two ball bearings on chuck spindle absorb both side and end thrust and increase service and efficiency. New automatic-release trigger switch, with locking pin for optional use. The right tool for heavy-duty drilling, driving hole saws, wood augers, spring expanded cylinder hones.

½" HEAVY-DUTY

Specifications

Drilling Capacity: In steel . . . ½"; In hardwood . . . 1"
Speed: No-load . . . 500 R.P.M.; Full-load . . . 330 R.P.M.
Weight: Net . . . 16½ lbs.; Shipping . . . 20 lbs.
Overall length . . . 18½"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); 3-jaw Jacobs chuck and key; automatic-release switch with locking pin for optional use; spade handle with chuck key holder; detachable pipe handle.
Optional Equipment—No. 1 or No. 2 Morse Taper Socket in place of chuck, no extra charge.
Standard Voltage—110: also available for 32, 220 or 250 volts.

Price, complete for all voltages (Code No. 40) **$68.00**
Special Speeds—600 or 750 R.P.M. ..... **$5.00 extra**
Universal Motor, operates on A.C. or D.C.

Attachments and Accessories

No. **125** Bench Drill Stand. **$32.00**
No. **126** Post Drill Stand .. **36.00**
No. **127** Pedestal Drill Stand **36.00**
Reversing Switch, extra **10.00**
No. **8449** Arbor for Grinding and Wire Wheels **$1.75**
No. **10244** Feed Screw **6.00**

Hole Saws, up to 4" (See Page 16)

5/8" UTILITY

5/8-Inch Utility Power Drill

THIS is one of the three units in the new Utility Power Drill line, introduced to give an extra margin of power, formerly available only in a Heavy Duty Production Drill, and the low speed and heavy torque necessary for utility service.

This drill is light in weight, perfectly balanced, with rugged, power-transmitting gears. Motor is mounted on ball bearings. Chuck spindle operates on Timken tapered roller bearings, insuring smooth power.

Ideal for driving wood augers, cutting with Hole Saws, powering cylinder hones and grinders, drilling in hard alloy metals, doing heavy-duty and precision work in a bench drill stand.

Priced to give the greatest value in drill history to garages, truck and body shops, fleet owners, railway repair shops, construction crews, maintenance departments, contractors, ship yards and drydocks and thousands of general service shops for whom these drills are designed.

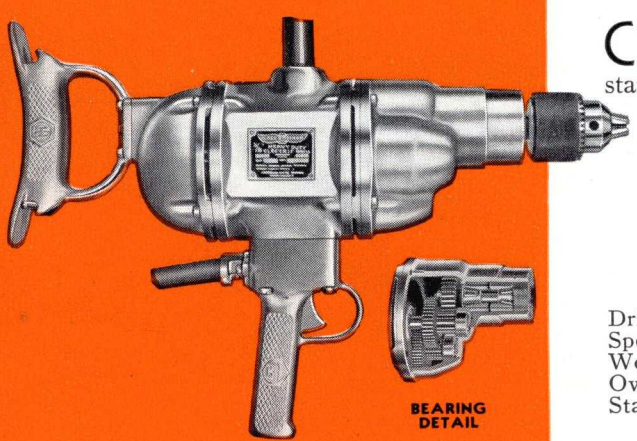
Specifications

Drilling Capacity: In steel . . . 5/32" to 5/8"; In hardwood . . . 1¼"
Speed: No-load . . . 300 R.P.M.; Full-load . . . 175 R.P.M.
Weight: Net . . . 17 lbs.; Shipping . . . 22½ lbs.
Overall Length . . . 18"
Standard Equipment—3-wire cable and plug (3rd wire for grounding); 5/8" Jacobs chuck and key; automatic-release switch with locking pin in side handle; spade handle with chuck-key holder; detachable pipe handle.
Optional Equipment—No. 2 Morse Taper Socket in place of chuck, no extra charge.
Standard Voltage—110; also available for 32, 220, or 250 volts.
Price, complete for all voltages (Code No. **238**) **$60.00**
Universal Motor, operates on A.C. or D.C.

Attachments and Accessories

No. **125** Bench Drill Stand . **$32.00**
No. **126** Post Drill Stand . . **36.00**
No. **127** Pedestal Drill Stand **36.00**
No. **19930** Feed Screw Assembly **$6.00**

Hole Saws, up to 4" (See Page 16)



5/8" HEAVY-DUTY

5/8-Inch Heavy Duty Ball-Bearing Drill

COMPLETELY redesigned for greater efficiency, lighter weight, increased power and improved handling. An outstanding feature of this unit is roller-bearing equipment on chuck spindle, to withstand severe side and end thrust; ball-bearing construction throughout. Amply powered and built for heavy-duty service. Adaptable to heavy-duty drilling, driving cylinder grinders and hones, hole saws and wood augers. Especially popular in bridge, wharf and building construction.

Specifications

Drilling Capacity: In steel . . . 5/32" to 5/8"; In hardwood . . . 1¼"
Speed: No-load . . . 450 R.P.M.; Full-load . . . 265 R.P.M.
Weight: Net . . . 22½ lbs.; Shipping . . . 28 lbs.
Overall length . . . 20¼"
Standard Equipment—3-conductor cable and plug; (3rd wire for grounding); 3-jaw Jacobs chuck and key; automatic-release switch with locking pin for optional use; spade handle with chuck key holder; detachable pipe handle.
Optional Equipment—No. 2 Morse Taper Socket in place of chuck, no extra charge.
Standard Voltage—110; also available for 220, or 250 volts.
Price, complete for all voltages (Code No. **42**) **$83.00**
Universal Motor, operates on A.C. or D.C.

Attachments and Accessories

No. **125** Bench Drill Stand. **$32.00**
No. **126** Post Drill Stand . . **36.00**
No. **127** Pedestal Drill Stand **36.00**
Reversing Switch, extra **$15.00**
No. **10245** Feed Screw **6.00**

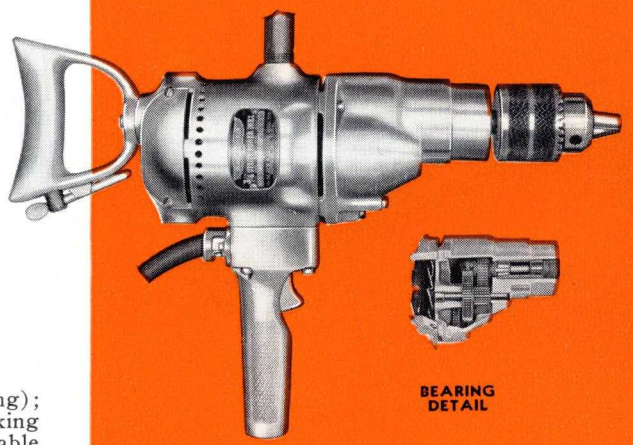
Hole Saws, up to 4" (See Page 16)

3/4-Inch Utility Power Drill

HERE is a popular-price, large capacity drill, delivering real heavy duty performance for the thousands of shops that want a combination of "production unit" power and "service tool" utility.

The ¾" Utility Power Drill is a powerful, ruggedly constructed tool, with triple gear reduction for low spindle speed and plenty of torque. Motor mounted on ball bearings. Chuck spindle operates on Timken tapered roller bearings.

Ideal for driving hole saws, wood augers, cylinder hones, etc. Designed especially for repair shops, construction crews, maintenance departments, contractors and a thousand general service uses.



¾" UTILITY

Specifications

Drilling Capacity: In steel . . . 3/16" to ¾"; In hardwood . . . 1½"
Speed: No-load . . . 250 R.P.M.; Full-load . . . 150 R.P.M.
Weight: Net . . . 19¼ lbs.; Shipping . . . 24 lbs.
Overall length . . . 18¾"
Standard Equipment—3-wire cable and plug (3rd wire for grounding); ¾" geared chuck and key; automatic-release switch with locking pin in side handle; spade handle with chuck-key holder; detachable pipe handle.
Optional Equipment—No. 2 or 3 Morse Taper Socket in place of chuck, no extra charge.
Standard Voltage—110. Also available for 220 or 250 volts.

Price, complete for all voltages (Code No. 239) **$68.00**
Universal Motor Operates on A.C. or D.C.

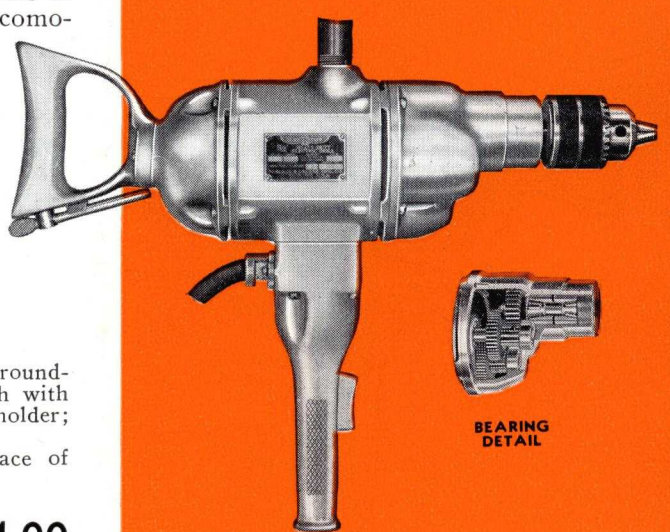
Attachments and Accessories

No. 125 Bench Drill Stand. **$32.00**
No. 126 Post Drill Stand .. **36.00**
No. 127 Pedestal Drill Stand **$36.00**
No. 19930 Feed Screw Assembly **6.00**

Hole Saws, up to 4" (See Page 16)

3/4-Inch Heavy Duty Ball-Bearing Drill

POWER and slow speed adapt this new unit to the needs of builders, heavy machinery manufacturers, car and locomotive maintenance shops and heavy-duty automotive repair work. Chuck spindle equipped with taper-roller bearings; all other shafts mounted on ball bearings. Extra long switch handle and pipe handle improve control of this unit. Special safety switch shuts off current the instant operator's grasp is released.



¾" HEAVY-DUTY

Specifications

Drilling Capacity: In steel . . . 3/16" to ¾"; In hardwood . . . 1½"
Speed: No-load . . . 375 R.P.M.; Full-load . . . 225 R.P.M.
Weight: Net . . . 27½ lbs.; Shipping . . . 33 lbs.
Overall length . . . 21"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); 3-jaw Jacobs chuck and key; automatic-release switch with locking pin for optional use; spade handle with chuck key holder; detachable pipe handle.
Optional Equipment—No. 2 or 3 Morse Taper Socket in place of chuck, no extra charge.
Standard Voltage—110: also available for 220 or 250 volts.

Price, complete for all voltages (Code No. 45) **$94.00**
Special Speeds—275, 600 or 900 R.P.M. ..... **$5.00 extra**
Universal Motor, Operates on A.C. or D.C.

Attachments and Accessories

No. 125 Bench Drill Stand. **$32.00**
No. 126 Post Drill Stand .. **36.00**
No. 127 Pedestal Drill Stand **36.00**
Reversing Switch, extra **$15.00**
No. 19960 Feed Screw **6.00**

Hole Saws, up to 4" (See Page 16)

BLACK & DECKER

7/8-Inch Utility Power Drill

(for twist drills with No. 3 Morse Taper Shanks)

A NEW Utility Drill, with exceptionally high torque and low spindle speed, designed for extra-heavy service in general maintenance and shop work. The motor is mounted on ball bearings and the spindle on roller bearings which take care of thrust in both directions.

Power enough for any drilling job it meets, with spindle speed adapting it to utility service, such as drilling with carbon bits, driving wood augers, drilling in hard allow metals. Ideai for railway repair shops, maintenance departments, ship yards and drydocks and general service shops.

Equipped with No. 3 Morse Taper extended spindle, for which drill manufacturers can supply carbon steel bits, 59/64" to 1¼"; High Speed bits, regular, 51/64" to 1 1/16"; larger than standard, 41/64" to 25/32" with No. 3 M.T. shank. Equip this drill with No. 3153 (3-2) Reducing Sleeve for bits with No. 2 M.T. shank.

7/8" UTILITY

Specifications

Drilling Capacity: In Steel . . . 7/8".
(With 3-2 or 3-1 Reducing Sleeve, range is extended down to 1/8".)
Speed: No-load . . . 200 R.P.M.; Full-load . . . 120 R.P.M.
Weight: Net . . . 17¾ lbs.; Shipping . . . 24 lbs.
Overall length . . . 19¼"
Standard Equipment—3-wire cable and plug (3rd wire for grounding); No. 3 Morse Taper Socket; automatic-release switch with locking pin in side handle; spade handle; detachable pipe handle.
Standard Voltage—110. Also available for 220 or 250 volts.

Price, complete for all voltages (Code No. **240**) **$73.00**
Universal Motor, operates on A.C. or D.C.

Attachments and Accessories

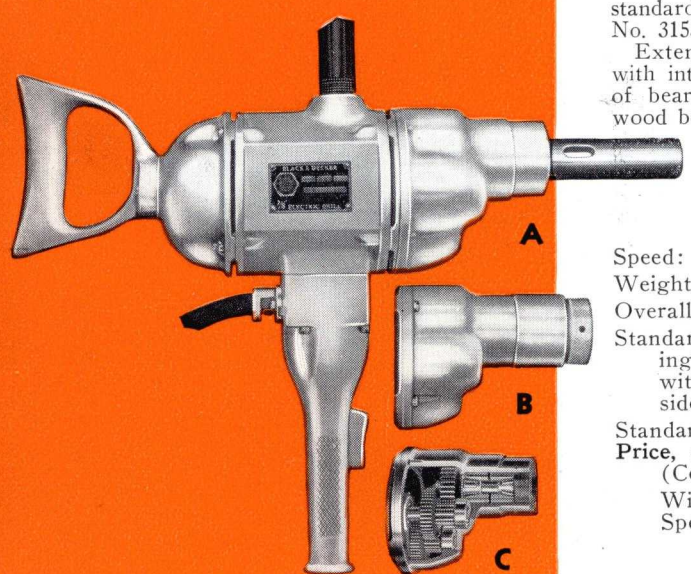
No. **125** Bench Drill Stand **$32.00**
No. **126** Post Drill Stand . **36.00**
No. **127** Pedestal Drill Stand **36.00**
No. **19930** Feed Screw assembly **6.00**
No. **3153** Morse Taper Reducing Sleeve (3-2) **$2.00**
No. **10601** ¾" Chuck on No. 3 M.T.A. **11.75**
No. **10949** No. 3 Morse Taper Arbor only **1.75**

7/8-Inch Heavy Duty Ball Bearing Drill

(for twist drills with No. 3 Morse Taper Shanks)

A VERSATILE tool for heavy duty construction service in shipyards, bridge building, fabricating plants and on structural timber work. Full anti-friction bearing construction, with taper-roller bearings on spindle and ball bearingss on other shafts. Equipped with No. 3 Morse Taper Socket, for which twist drill manufacturers can supply carbon steel bits, 59/64" to 1¼"; high speed bits, regular, 51/64" to 1 1/16"; larger than standard, 41/64" to 25/32" with No. 3 M.T. shanks. Equip this Drill with No. 3153 (3-2) Reducing Sleeve for bits with No. 2 M.T. shanks.

Extended spindle is standard equipment (Fig. A); can be furnished with internal spindle (Fig. B) at slight extra cost. Fig. C shows detail of bearing and gears. Can be equipped with Reversing Switch for wood boring.



7/8" HEAVY-DUTY

Specifications

Drilling Capacity: In Steel . . . 7/8".
(With 3-2 or 3-1 Reducing Sleeve, range is extended down to 1/8").
Reaming Capacity: Light . . . up to 5/8"; Heavy . . . up to ½".
Speed: No-load . . . 375 R.P.M.; Full-load . . . 225 R.P.M.
Weight: Net . . . 24¾ lbs.; Shipping . . . 33 lbs.
Overall length . . . 21¾"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); No. 3 Morse Taper Socket; instant-release safety switch with locking pin for optional use, spade handle and detachable side handle.
Standard Voltage—110; also available for 220 or 250 volts.

Price, complete for all voltages, with Extended Spindle (Code No. **46**) **$98.00**
With Internal Spindle (Code No. **302**) **$103.00**
Special Speeds—275 or 600 R.P.M. ..... **$5.00 extra**
Universal Motor, operates on A.C. or D.C.

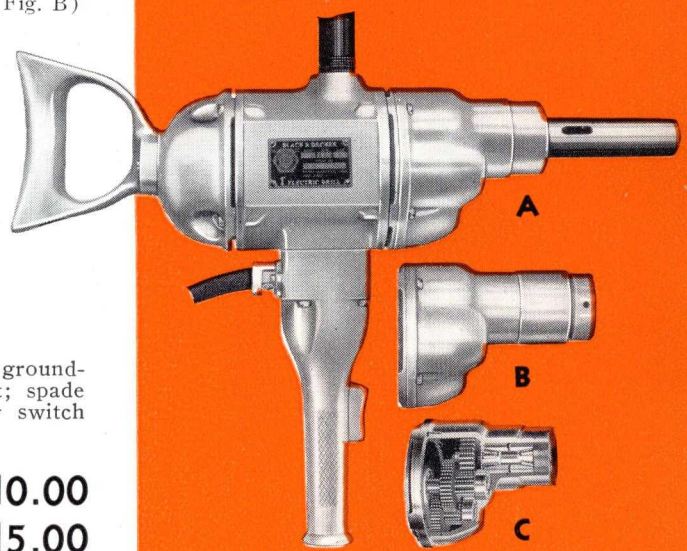
Attachments

No. **125** Bench Drill Stand **$32.00**
No. **126** Post Drill Stand . **36.00**
No. **127** Pedestal Drill Stand **36.00**
No. **19960** Feed Screw **6.00**
No. **3153** Morse Taper Reducing Sleeve (3-2) **2.00**
No. **10601** ¾" Chuck on No. 3 M.T.A. **$11.75**
No. **10949** No. 3 Morse Taper Arbor only **1.75**
Reversing Switch **15.00**

1-Inch Heavy Duty Ball-Bearing Drill

A RUGGED, powerful tool for structural work in drilling and reaming applications. Suitable to wood boring, or drilling, quarrying, railway shop, fabricating and ship building. Extended handles give perfect control; anti-friction bearings insure full power and long life. Extended spindle, standard (Fig. A); can be supplied, with internal spindle (Fig. B) at slight extra cost. Fig. C shows detail of bearings and gears.

Equipped with No. 3 Morse Taper Socket, for which twist drill manufacturers can supply carbon steel bits 59/64" to 1¼"; High Speed Bits, regular, 51/64" to 1 1/16"; larger than standard, 41/64" to 25/32" with No. 3 Morse Taper Shanks. Equip this Drill with No. 3153 (3-2) Reducing Sleeve for bits with No. 2 M.T. shank.



1" HEAVY-DUTY

Specifications

Drilling Capacity: In Steel . . . 1".
(With 3-2 or 3-1 Reducing Sleeve, range is extended down to ⅛").
Reaming Capacity: Light . . . up to ¾"; Heavy . . . up to ⅝".
Speed: No-load . . . 350 R.P.M.; Full-load . . . 180 R.P.M.
Weight: Net . . . 27¾ lbs.; Shipping . . . 37 lbs.
Overall length . . . 19¾"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding). Extended spindle with No. 3 Morse Taper Socket; spade handle and detachable pipe handle, instant-release safety switch with locking pin.
Standard Voltage—110: also available for 220 or 250 volts.

Price, complete for all voltages with Extended Spindle (Code No. **301**) **$110.00**

With Internal Spindle (Code No. 47) **$115.00**

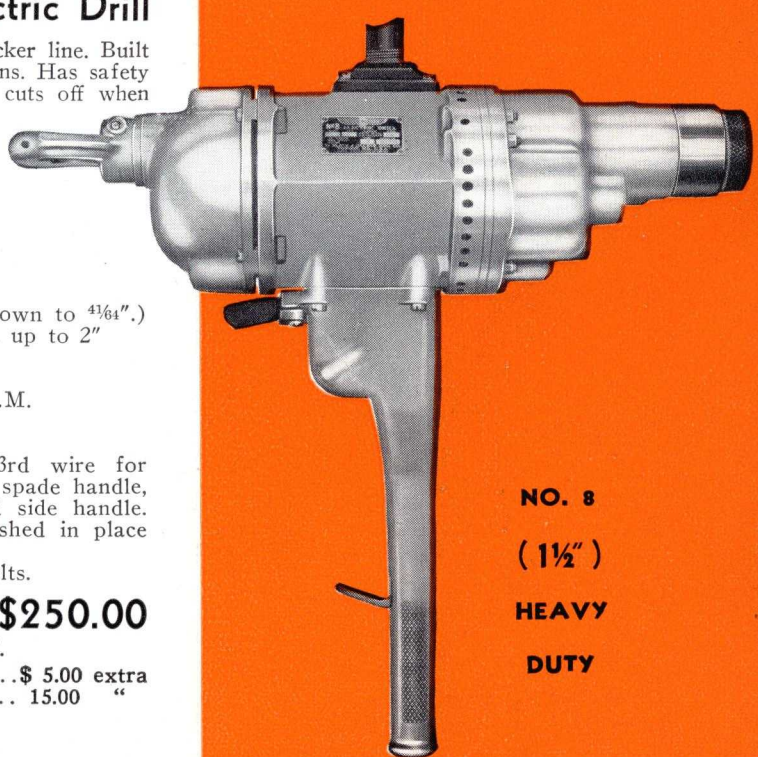
Special Speeds . . . 250 or 600 R.P.M. ..... **$5.00 extra**
Universal Motor, operates on A.C. or D.C.

Attachments

No. **125** Bench Drill Stand **$32.00**
No. **126** Post Drill Stand . **36.00**
No. **127** Pedestal Drill Stand **36.00**
No. **19960** Feed Screw **6.00**
Reversing Switch **15.00**
No. **3153** Morse Taper Reducing Sleeve (3-2) **$2.00**
No. **10601** ¾" Chuck on No. 3 M.T.A. **11.75**
No. **10949** No. 3 Morse Taper Arbor only **1.75**

No. 8 Heavy Duty Ball-Bearing Electric Drill

THE most powerful heavy duty drill in the Black & Decker line. Built throughout for long service under most severe conditions. Has safety type switch with powerful spring which automatically cuts off when operator's grasp is released. Equipped with No. 4 Morse Taper Socket as removable sleeve held in the spindle by a knurled nut. Ideal for heavy duty drilling in all metals, ore composition material, etc. Reaming steel plates, wood boring in heavy timbers.



NO. 8
(1½")
HEAVY
DUTY

Specifications

Drilling capacity: In Steel . . . 1 1/64" to 1½"
(With No. 4-3 Reducing Sleeve range is extended down to 41/64".)
Drilling capacity in hardwood . . . up to 4"; in coal . . . up to 2"
Light Reaming Capacity . . . up to 1⅛"
Heavy Reaming Capacity . . . up to ⅞"
Speed: No-load . . . 350 R.P.M.; Full-load . . . 190 R.P.M.
Weight: Net . . . 66 lbs.; Shipping . . . 94 lbs.
Overall length . . . 24½"
Standard Equipment—3-conductor cable with plug (3rd wire for grounding); No. 4 Morse Taper Socket, detachable spade handle, and pipe handle; safety release switch in extended side handle.
Optional Equipment—No. 3 Morse Taper Socket furnished in place of No. 4 when specified. No extra charge.
Standard Voltage—110; also available for 220 or 250 volts.

Price, complete for all voltages (Code No. **48**) **$250.00**
Universal Motor, operates on A.C. or D.C.

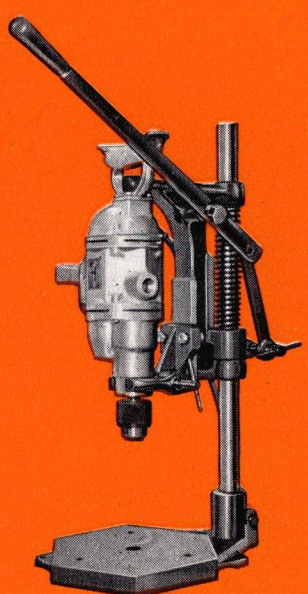
Special speed of 500 or 700 R.P.M. ..... **$ 5.00 extra**
Special speed of 250 R.P.M. ..... **15.00** "

Attachments

Reversing switch **$20.00**
No. **2140** Feed Screw **13.25**
No. **4122** No. 4-3 Reducing sleeve **$2.50**

NO. 20 BENCH STAND

NO. 40 BENCH STAND



NO. 60 BENCH STAND

BLACK & DECKER

Bench Drill Stands

A SIMPLIFIED line of Bench Drill Stands that increase the utility of Black & Decker Drills and Screw Drivers by converting the portable unit into a drill press for heavy duty and precision work.

With the adjustable features of these Stands, no adapters are required, and one stand will fit several different tools. An adjustable-jaw clamp fits spindle housings of varying sizes—and an adjustment for tool length is quickly made on any of these stands.

The handle leverage enables the operator to put tremendous pressure on the work, or feed slowly and smoothly for most accurate work. The tool bracket can be raised or lowered on the supporting column and swung in an arc to any desired position.

On the next page are listed Drill Stands adapted to Post or Pedestal mounting. These two types are especially recommended where bench space is at a premium, or where unusually large pieces are to be drilled. On Post and Pedestal Stands, the work table as well as the tool bracket can be raised or lowered, or swung out of the way, if not required. The maximum feed and center-line measurements are the same as for corresponding Bench Stands listed below.

Stand No.	For Use with These Units	Bench Drill Stand				Max. Feed	C/L Bit to C/L Col.
		Code No.	Weight		Price		
			Net	Ship-ping			
No. 20	Current Models ¼″ Jr. Drill ¼″ Spec. “ ¼″ H.D. “ ¼″ Low Speed “ 5/16″ “ ⅜″ Util. “ 12 Screw-Driver	119	16 lbs.	20 lbs.	$14.00	2″	5¼″
No. 22	22 Tapper †22 Screw-driver	121	16 lbs.	20 lbs.	$16.00	2″	5¼″
No. 40	⅜″ Std. Drill ½″ Jr. “ ½″ Spec. “	122	30 lbs.	50 lbs.	$22.00	4″	6″
No. *60	½″ H.D. “ ⅝″ Utility “ ⅝″ H.D. “ ¾″ Utility “ ¾″ H.D. “ ⅞″ Utility “ ⅞″ H.D. “ 1″ H.D. “	125	59 lbs.	83 lbs.	$32.00	4″	8″

† Nose of No. 22 Screwdriver has to be turned to fit the No. 22 Stand.
* No. 60 Stand has a "universal" adaptor and will also fit drills listed under No. 40 Stand. Other Stands are for models specified only.

Horizontal Drill Stands (Fig. H, Page 15)

With this stand, drills can be used for stationary drilling, reaming, light buffing, grinding and wire brushing. The stand is screwed or clamped to the bench and holds the drill rigidly by means of an adjustable chain.

No. **14657** Drill Stand for current model ¼″ Special ¼″ Heavy Duty and 5/16″ Drills. Weight: Net . . . 3¾″; Shipping . . . 4 lbs. $2.75

No. **8169** Drill Stand for ¼″ Junior Drill, Weight: Net . . . 1¼ lbs.; Shipping . . . 1¾ lbs. $1.50

Post and Pedestal Stands

Stand No.	For Use with These Units	Post Drill Stand				Pedestal Drill Stand			
		Code No	Weight Net	Weight Shipping	Price	Code No	Weight Net	Weight Shipping	Price
	Current Models								
No. 20	¼" Jr. Drill ¼" Spec. " ¼" H.D. " ¼" Low Speed " 5/16" " ⅜" Util. " 12 Screwdriver	120	24 lbs.	32 lbs.	$18.00	....	....	....	....
No. 22	22 Tapper 22 Screwdriver	197	24 lbs.	32 lbs.	$20.00	....	....	....	....
No. 40	⅜" Std. Drill ½" Jr. " ½" Spec. "	123	83 lbs.	106 lbs.	$26.00	124	105 lbs.	139 lbs.	$28.00
No. *60	½" H.D. " ⅝" Util. " ⅝" H.D. " ¾" Util. " ¾" H.D. " ⅞" Util. " ⅞" H.D. " 1" H.D. "	126	87 lbs.	110 lbs.	$36.00	127	109 lbs.	141 lbs.	$36.00

*The No. 60 Stand will also fit the three drills listed under the No. 40 Stand, and is recommended where these drills are used in combination with larger drills. The other Stands fit only the drills indicated. Maximum feed and center-line specifications for Post and Pedestal Stands are the same as for corresponding Bench Stands shown on Page 13.

Radial Arm

This Radial Arm is particularly adapted to chain production methods. Arm has vertical adjustment up and down column and can be swung in any desired position.

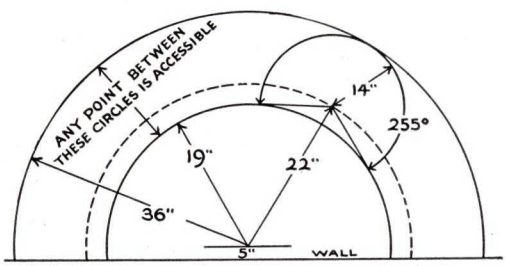


Diagram shows wide operating range of this arm, which makes it suitable for almost any work.

Travel of Arm on column . . . 24"; Vertical travel of bracket . . . 4"
Angular adjustment, electric tool bracket..255°; Angle of swing..180°
Distance, center of column to elbow...22"; Elbow to spindle of electric tool...14"
Effective area of operation is within radii from 19" to 36" from column.
Net weight...180 lbs. Shipping weight...235 lbs.
Price, complete (Code No. **135**) **$120.00**

In ordering be sure to specify type and size of Electric Tool to be used, so that the proper adapter will be supplied on the bracket.

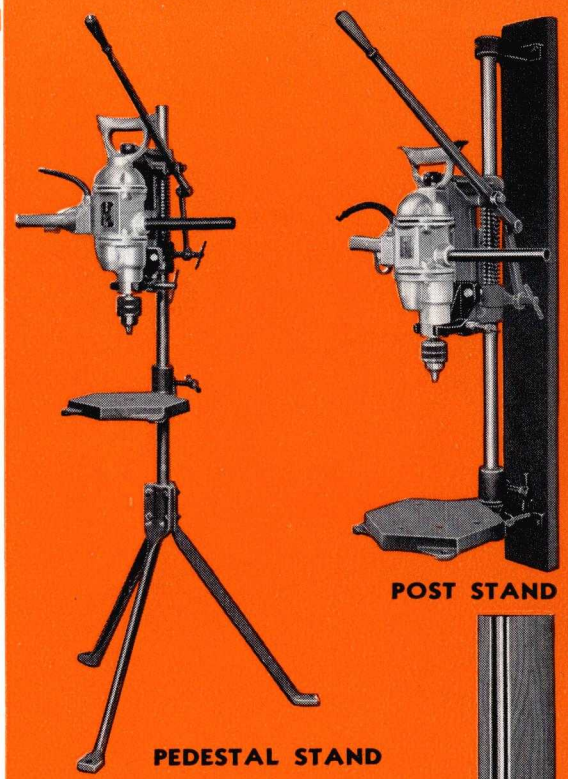
Sliding Arm

The Sliding Arm operates on ball and roller bearings and can be furnished on pedestal as shown in illustration or with a bracket to mount on a post or column.

This tool is particularly adaptable for use on production lines for operating electric drills, nut runners, screw drivers, etc.

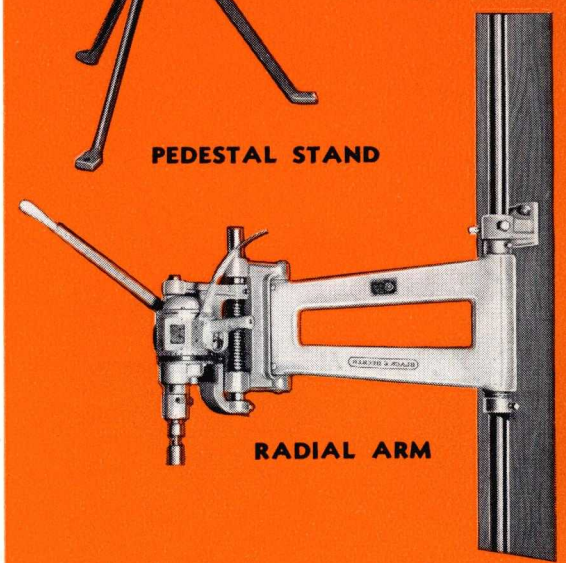
Total travel of slide (horizontal)..26½"; Travel of tool in bracket..4"
Radius for operating (minimum)...21½"; (maximum)...49"
Angle of swing (pedestal mounted) . . . 360°
(pipe mounted)...120°
Net weight (pedestal mounted)... 415 lbs. Shipping weight...490 lbs.
Net weight (pipe mounted) . . . 175 lbs.; Shipping weight . . . 250 lbs.
Price, pedestal mounting, fixed head (Code No. **136**) ..**$300.00**
Price, pedestal mounting, adjustable head (No. **137**) ... **330.00**
Price, pipe mounting for 3" pipe, fixed head (No. **138**) .. **265.00**
Price, pipe mounting, adjustable head (Code No. **139**).. **290.00**

DRILL STANDS

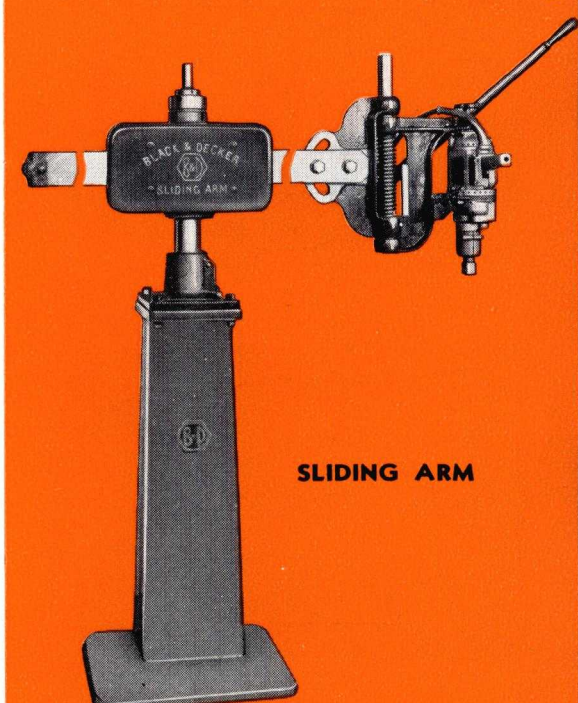


POST STAND

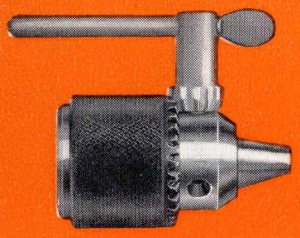
PEDESTAL STAND



RADIAL ARM

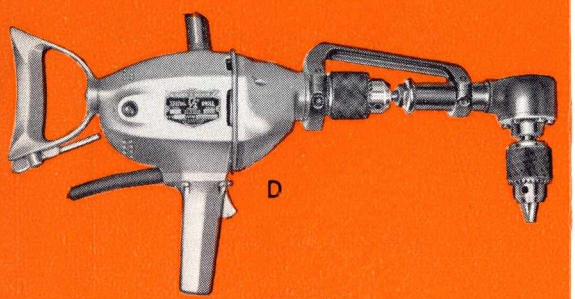


SLIDING ARM


A

B

C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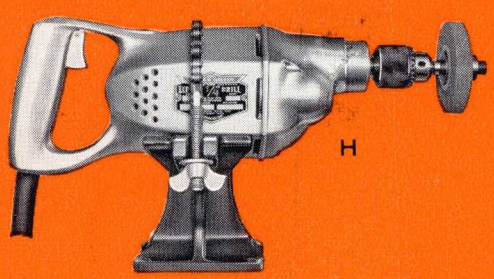
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BLACK & DECKER

Electric Drill Attachments

Jacobs Drill Chucks and Keys (Fig. A)

Chuck Size	Chuck & Key Cat. No.	Chuck & Key Price	Chuck Key * Cat. No.	Chuck Key * Price	Units Used On
1/4" Threaded	13147	$4.00	3030-L 3030-T	$.35 .35	3/16" & 1/4" Shorty (all types) 5/16" Drill (type A)
1/4" Tapered	3030	4.00	3030-L 3030-T	.35 .35	1/4" Special (all types); 1/4" Junior (type A); 1/4" L.D. (all types)
1/4" Tapered	7705	4.00	7705-L	.35	1/4" H.D. (all types)
5/16" Tapered	6133	4.75	6133-L 6133-T	.50 .50	5/16" (all types)
3/8" Tapered	7244	5.25	4794-L	.50	3/8" Utility (types G to L); 3/8" Std. (type H)
3/8" Tapered	4794	5.25	4794-L	.50	No. 2 Tapper (all types) } Standard No. 22 Tapper (all types) } Equipment
3/8" Tapered	20454	9.00	4794-L	.50	No. 2 Tapper (all types) } Special No. 22 Tapper (all types) } Equipment
1/2" Tapered	9480	7.00	1534-L 1534-T	.60 .60	1/2" Special (types C & D); 1/2" H.D. (type A)
1/2" Tapered	15839	5.50	4794-L	.50	1/2" Junior (type A)
5/8" Tapered	11329	8.00	1534-L 1534-T	.60 .60	5/8" Utility Power (type A); 5/8" H.D. (types A & B); 5/8" Super Service (types A & B); 5/8" Std. (types P, PG & R);
3/4" Tapered	9522	10.00	9522-L 9522-T	.90 .90	3/4" Utility Power (type A); 3/4" Std. (types B & BD); 3/4" H.D. (types A [No. 1500 up] & C.)

* "L" after Cat. No. indicates L-shaped key as illustrated; "T" indicates T-shaped key.

Keyless Chucks (Fig. B)

"Portomatic" Keyless chucks can be furnished as replacements on all Black & Decker 1/4" and 5/16" Drills.

Cat. No.	Mfg. No.	For Use on:	Price*
12792	250-1A	1/4" Spec. and 1/4" L.D.	$5.00
10666	250	1/4" H.D. and 1/4" Low Speed	5.00
10800	312	5/16" and 5/16" H.D.	6.00

* These are replacement prices. See listings under individual tools for prices as original equipment.

Chucks Mounted on Morse Taper Arbors (Fig. C)

No.	1585	5/8" Chuck with No. 2 Morse Taper Arbor	$9.25
No.	10601	3/4" Chuck with No. 3 Morse Taper Arbor	11.75
No.	3151	No. 2 Morse Taper Arbor only	1.25
No.	10949	No. 3 Morse Taper Arbor only	1.75

Morse Taper Sockets and Reducing Sleeves (Fig. F)

For use with taper shank bits in 1/2", 5/8" and 3/4" Drills. Fit on drill spindle in place of chuck.

No.	11066	No. 1 Socket for 1/2" Drills	$4.20
No.	11676	No. 1 Socket for 5/8" & 3/4" Drills	4.20
No.	12186	No. 2 Socket for 1/2" H.D.	5.00
No.	11067	No. 2 Socket for 5/8" and 3/4" Drills	5.00

To adapt Morse taper sockets to next smaller taper bits.

No.	4122	No. 4-3 Reducing Sleeve	$2.50
No.	3153	No. 3-2 Reducing Sleeve	2.00
No.	3152	No. 2-1 Reducing Sleeve	1.50

Right Angle Attachment (Fig. D)

Enables operator to reach out-of-the-way places in work on joists, etc. A handy attachment for all types of contracting jobs and electrical installations. Equipped with 3-jaw Geared Chuck, 1/2" capacity.

No.	6222	Right-angle Drilling Attachment, for 1/2" Special type C and 5/8" Standard Drill, type P only	$30.00
No.	17819	Right Angle Drilling Attachment for 1/2" Special Type D	30.00
No.	17820	Right Angle Drilling Attachment for 1/2" H.D. Type A and 5/8" Standard Type R and 5/8" Utility Power Type A	30.00

Feed Screw Attachment (Fig. E)

Use this Feed Screw Attachment to feed drill in out-of-the-way places. Furnished complete with Adaptor.

No.	10244	For 1/2" Drill Type C, 1/2" H.D. and 5/8" Standard R	$ 6.00
No.	19930	For all Utility Power Drills	6.00
No.	19960	For 3/4" H.D. (types E & F); 7/8" H.D. (types B to F); 1" H.D. (types B to D)	6.00
No.	10245	For 5/8" and previous models 3/4", 7/8" and 1"	6.00
No.	2140	For No. 8 Drill only	13.25

Wheel Arbors (Fig. G)

Adapt 1/4" and 1/2" Drills to light grinding and wire brushing, by holding wheels in chuck of drill. Body of arbor is 1/2" diam. and will take 3" and 4" wheels.

No.	30771	1/4" Drill Arbor (1/2" diam.; 1/4" shank)	$ .85
No.	8449	1/2" Drill Arbor (1/2" diam.; 1/2" shank)	1.75

Electric Cable

Special lengths of 18-gauge, 3-conductor Cable	15c per foot*
Special lengths of 16-gauge, 3-conductor Cable	20c per foot*
Special lengths of 14-gauge, 3-conductor Cable	30c per foot*
Special lengths of 12-gauge, 3-conductor Cable	60c per foot*

* Attachment plug extra.

Note: 14-gauge Extension Cord must be used with 3/4" and 1" Drills and 8" and 10" Saws to obtain full power at the tool.

Horizontal Drill Stands (Fig. H). **See listing, Page 13**

Hole Saws

For Use with 1/2", 5/8" and 3/4" Electric Drills

BLACK & DECKER Hole Saws increase the capacity of electric drills to a maximum of 4" for cutting clean, round holes in steel, cast iron, sheet metal, wood or any other material that a hack saw will cut.

Black & Decker Hole Saws are available in two types; coarse-tooth Saws for most efficient cutting in wood, fibre, bakelite, cast iron and all thick, coarse materials; and fine-tooth* Saws for sheet metal, steel, porcelain and all thin or sheet materials.

Both types of Hole Saws are made of highest quality tungsten steel, and both are interchangeable on proper size mandrels. The mandrel holds a 1/4" twist drill which cuts a pilot hole and serves as a guide for the saw.

Applications—Use Hole Saws with any 1/2", 5/8" or 3/4" Black & Decker Drill for cutting holes in the following operations:

Installing car heaters, radios, clocks, etc.
Relief drains in soil lines.
Attaching hot-water heaters to boilers.
Running new pipe lines or electrical conduit through floors and walls.
Installing oil-burners, stokers and automatic blowers in furnaces.
Setting new dials in instrument panels.
Innumerable other hole-cutting applications in any material a hack saw will cut.

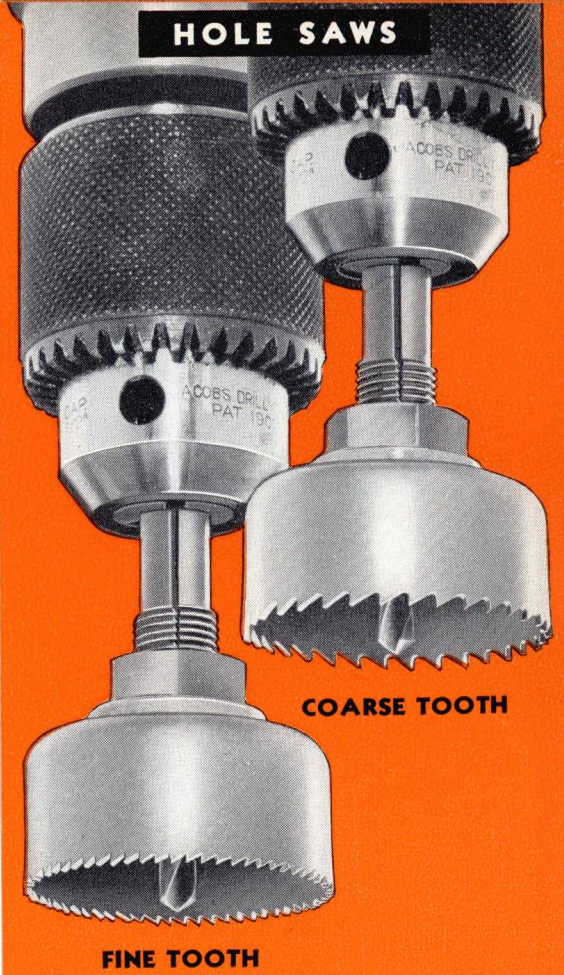
Special Saws, with extra coarse tooth arrangement available at 50c higher than standard prices, up to 1 7/8", and $1.00 higher in 2" to 4" sizes.

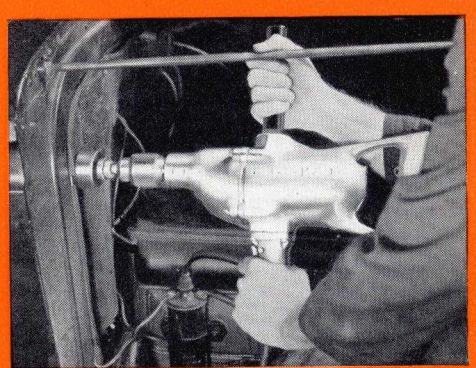
Hole Saw Specifications

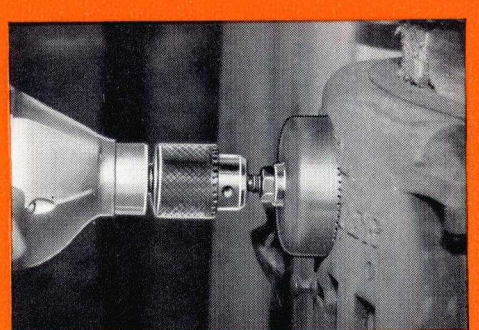
Saw Size Outside Diam.	Fine-Tooth* Saw Cat. No.	Coarse-Tooth Saw Cat. No.	Use with Mandrel No.	For Conduit Size	For Pipe Tap Size	Price Each (Saw only without Mandrel)
3/4"	16882	14906	14903†	3/8"	....	$.65
7/8"	16883	14908	"	1/2"	3/4"	.65
1"	16884	14910	"	....	....	.65
1 1/8"	16885	14912	"	3/4"	....	.85
1 3/16"	17678	17679	14904‡	....	1"	.85
1 1/4"	16886	14911	"	....	....	.85
1 3/8"	16887	14913	"	1"	....	.85
1 1/2"	16888	14914	"	....	1 1/4"	.85
1 5/8"	16889	14915	"	....	....	1.00
1 3/4"	16890	14916	"	1 1/4"	1 1/2"	1.00
1 7/8"	16891	14917	"	....	....	1.00
2"	16892	14918	"	1 1/2"	....	1.20
2 1/16"	16893	14919	18028§	....	....	1.20
2 1/8"	16894	14920	"	....	....	1.20
2 1/4"	16895	14922	"	....	2"	1.40
2 3/8"	16896	14921	"	....	....	1.40
2 1/2"	16897	14923	"	2"	....	1.40
2 5/8"	16898	14924	"	....	....	1.50
2 3/4"	16899	14925	"	....	2 1/2"	1.50
2 7/8"	16900	14927	"	....	....	1.50
3"	16901	14926	"	2 1/2"	....	1.65
3 1/8"	16902	14930	"	....	....	1.65
3 1/4"	16903	14929	"	....	3"	1.65
3 1/2"	16904	14928	"	3"	....	1.65
4"	16905	14932	"	3 1/2"	....	2.00

†14903 Mandrel with pilot drill (for 3/4" to 1 1/8" Saws) $1.65
‡14904 Mandrel with pilot drill (for 1 3/16" to 2" Saws) 1.65
§18028 Mandrel with pilot drill (for 2 1/16" to 4" Saws) 2.50
14935 1/4" Pilot drill only, fits all size mandrels ..... .35

*Unless specified by number, Fine Tooth Hole Saws will be supplied on orders.







No. 3 Torsimeter

Adjustable Clutch Screwdriver

THE Torsimeter principle of Screw Driver construction, which has won universal approval in production work, provides a unit which automatically drives every screw to a uniform, pre-determined depth. An adjustable clutch is set for the desired tension—and insures uniform production screw driving. In the No. 3 Torsimeter this principle is adapted to a very light, compact tool especially designed for radio, cabinet and airplane work; for self-threading screws in light metal and wood—and can be equipped with a socket for hex head screws.

The Torsimeter also has a positive clutch which permits the spindle to idle until the bit "finds" the screw slot.

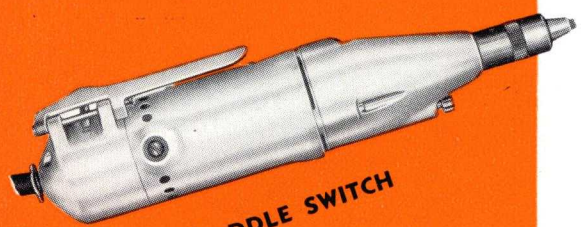
Specifications

Capacity . . . up to No. 4 Screws
No-load Speed . . . 1000 R.P.M.
Overall length (including bit) . . . 11½"
Standard Equipment—3-wire cable with plug, (3rd wire for grounding); toggle switch mounted in end cap; one No. 4 bit with finder; Universal Motor for A.C. or D.C.
Standard Voltage—110; also available for 220 or 250 volts.

No. 3 Torsimeter with bonnet grip (Code No. **49**) **$52.00**
Weight: Net . . . 2¾ lbs.; Shipping . . . 4 lbs.

No. 3 Torsimeter, with paddle switch (Code No. **244**) **$55.00**
Weight: Net . . . 3 lbs.; Shipping . . . 4¼ lbs.

Reversing Switch (for either unit) ..... **$10.00 extra**



Torsimeter Screwdriver Bits

for No. 3 and No. 31 Torsimeters (*Pages* 17 *and* 18)

THESE special bits are equipped with ¼" hexagon shank to fit the above units, and can be used with centering sleeve (Fig. C) or without sleeve (Fig. A).

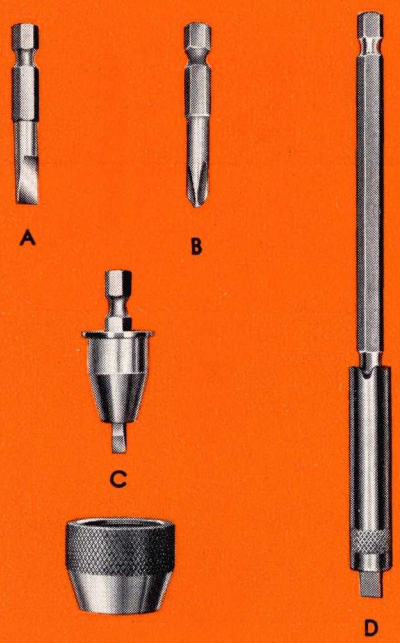
Use protector sleeve (Fig. E) when centering sleeve is not used. Extra length bits (Fig. D) can be supplied in sizes 6 and 8 only, with or without centering sleeves.

Special Bits (Fig. B) for driving Phillips Head Screws with cross slots, are also available for the Torsimeter.

Centering Sleeves and Protecting Sleeves for standard length bits are supplied as standard equipment. Replacements may be obtained as follows:

18050 Centering Sleeve for Nos. 2-3 Bit (No. 3 Torsimeter) **$0.50**
15588 Centering Sleeve for No. 4 Bit (No. 3 Torsimeter) ..... **.50**
16529 Centering Sleeve for Nos. 6-8 Bits (No. 3 Torsimeter) ... **.50**
13210 Centering Sleeve for No. 4 Bit (No. 31 Torsimeter) ..... **.50**
13209 Centering Sleeve for Nos. 6-8 Bits (No. 31 Torsimeter) ... **.50**
15469 Centering Sleeve for No. 10 Bit (No. 31 Torsimeter) .... **.50**
16773 Centering Sleeve for No. 12 Bit (No. 31 Torsimeter) ..... **.50**
19178 Protecting Sleeve for all Bits on No. 3 Torsimeter ..... **.65**
13201 Protecting Sleeve for all Bits on No. 31 Torsimeter ..... **.65**

TORSIMETER BITS



Size of Bit	Cat. No.	Length of Bit	Centering Sleeve	Price Each	Price Box of 5	Price each Lot of 50	Price each Lot of 100	Price each Lot of 500
No. 2-3	18051	1⅜"	without	$0.75	$2.65	$0.42	$0.38	$0.30
No. 4	13208	1⅜"	without	.75	2.65	.42	.38	.30
	17690	3"	without	1.00	3.50	.55	.50	.40
No. 6	13207	1⅜"	without	.75	2.65	.42	.38	.30
	13353	3"	without	1.00	3.50	.55	.50	.40
	13356	3"	with	1.50	5.25	.80	.75	.60
	13470	5½"	without	1.10	3.85	.60	.55	.45
	13469	5½"	with	1.60	5.60	.90	.80	.65
No. 8	14567	1⅜"	without	.75	2.65	.42	.38	.30
	14765	3"	without	1.00	3.50	.55	.50	.40
	14766	3"	with	1.50	5.25	.80	.75	.60
	14763	5½"	without	1.10	3.85	.60	.55	.45
	14764	5½"	with	1.60	5.60	.90	.80	.65
No. 10	15475	1⅜"	without	.75	2.65	.42	.38	.30
	18594	3"	without	1.00	3.50	.55	.50	.40
	18593	3"	with	1.50	5.25	.80	.75	.60
No. 12	16772	1⅜"	without	.75	2.65	.42	.38	.30
Phillips No. 1*	17922	1⅜"	without	.90	3.75	.55	.50	.40
Phillips No. 2*	17923	1⅜"	without	.90	3.75	.55	.50	.40

* See Page 24 for description of Phillips Head Screws and Bits
Socket Wrenches for Torsimeters, Page 23.
Quantity prices apply only on designated quantities, all of one size.

No. 31 Torsimeter

Adjustable Clutch Screwdriver

THE name "Torsimeter" designates an ingenious clutch arrangement by which it is possible to pre-determine the amount of torque or torsion to be applied to each particular screwdriving job. Once the adjusting screw is set for the desired tension, the tool will automatically release each screw at the same torsion point, insuring uniform screwdriving operation. This feature also eliminates marring of screw head or surrounding surface.

The "Torsimeter" is also equipped with a positive clutch which permits the spindle to idle until the bit "finds" the screw slot.

Four handle styles adapt this unit to practically any working condition or problem:

The bonnet grip type is ideal for working between obstructions and in close corners; toggle switch in bonnet.

With the bonnet grip and paddle switch, the unit can be suspended and as operator grasps the unit around field case, his hand automatically throws switch to ON position; when tool is released a spring returns switch and paddle to normal OFF position.

Where a long "reach" is needed, use the end handle type; tumbler switch in handle.

Where working space is not obstructed, the side handle type is the best balanced unit for general work; automatic-release trigger switch in side handle.

Ideal for driving screws of all types, including slotted and hex. heads, in metal or wood. Especially adapted for assembling radio and refrigerator cabinets, airplane and automobile bodies, and general production cabinet work.

Specifications

Capacity: up to No. 8 screw.
Speed: No-load . . . 750 R.P.M.

BONNET GRIP—
Weight: Net . . . 4½ lbs.; Shipping . . . 6 lbs.
Overall length (including bit) . . . 12⅝"

Price, complete for all voltages (Code No. **51**) **$57.00**

PADDLE SWITCH—
Weight: Net . . . 5 lbs.; Shipping . . . 6¼ lbs.
Overall length (including bit) . . . 12⅝"

Price, complete for all voltages (Code No. **242**) **$60.00**

END HANDLE—
Weight: Net . . . 4¾ lbs.; Shipping . . . 6 lbs.
Overall length (including bit) . . . 11¾"

Price, complete for all voltages (Code No. **50**) **$57.00**

SIDE HANDLE—
Weight: Net . . . 4¾ lbs.; Shipping . . . 6 lbs.
Overall length (including bit) . . . 10⅞"

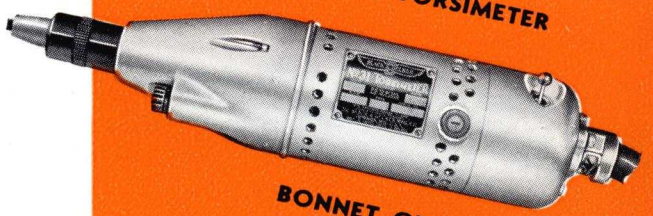
Price, complete for all voltages (Code No. **52**) **$57.00**

Standard Equipment—3-conductor cable and plug (3rd wire for grounding); switch in handle, one No. 6 Bit with Centering Sleeve and Protector Sleeve. Universal Motor, operates on A.C. or D.C.

Optional Equipment—Special Speed 1200 R.P.M. ....**$2.50 extra**

Standard Voltage—110; also available for 220 or 250 volts.

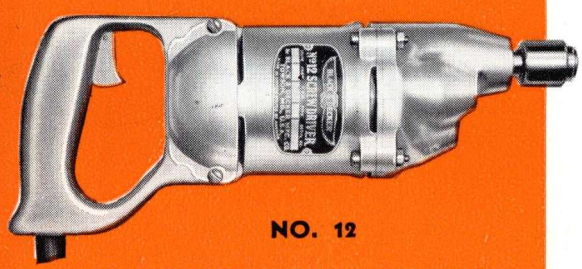
Attachments and Accessories—Reversing Switch extra **$10.00**



BLACK & DECKER

No. 12 Electric Screw Driver and Wrench

A POSITIVE pin-type clutch in the driving spindle, permits the spindle to idle until the bit "finds" the screw slot. This type of clutch is very sensitive and produces uniform production work. Gear and field cases are assembled with through bolts for added strength and to facilitate inspection. The unit is adapted to screw driving in metal or wood, nut tightening, lag screw driving, cabinet and furniture building, boat building, automobile body and aviation assembly. When equipped with Reversing Switch, it is ideal for assembling and dis-assembling pieces that are shipped "knocked-down."



NO. 12
SCREW-DRIVER & WRENCH

Specifications

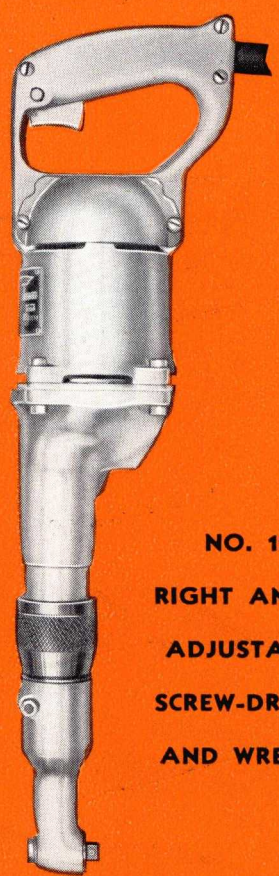
Capacity in hardwood . . . No. 12x2" screw
Lag screw capacity . . . up to ¼"x3"
Nut running capacity . . . up to ¼" diam.
No-load Speed . . . 500 R.P.M.
Weight: Net . . . 6¾ lbs.; Shipping . . . 9 lbs.
Overall length (not including bit) . . . 13¼"
Standard Equipment—Quick-change chuck, with 7/16" hex socket; 13° positive clutch; 3-conductor cable and attachment plug (3rd wire for grounding); and one each No. 8 and No. 12 standard bits with centering sleeves; automatic-release switch with locking pin for optional use. Universal Motor, Operates on A.C. or D.C.

Standard Voltage—110; also available for 32, 220, or 250 volts.

Price, complete for all voltages (Code No. **53**) **$58.00**
Special Speeds—750, 1,000 or 1,600 R.P.M. ..... **$2.50 extra**
No. **119** Bench Stand ..... **$14.00** Reversing Switch .... **$10.00 extra**

No. 12 Right Angle Adjustable Screw Driver and Wrench

THE No. 12 Screw Driver and Wrench is also available with an adjustable clutch and a number of right-angle drive heads that adapt this tool to special assembly operations in hard-to-reach places. Each head is adapted to a specific type of screw or nut running application.



NO. 12
RIGHT ANGLE
ADJUSTABLE
SCREW-DRIVER
AND WRENCH

Specifications

Capacity: Screw driving . . . No. 12x2" screw
Lag screw . . . up to ¼"x3"
Nut running . . . up to ¼" diam.
Standard No-load speed . . . 500 R.P.M.
Weight: Net . . . 11½ lbs.; Shipping . . . 15 lbs.
Overall length . . . 19¾"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); special geared end with adjustable clutch and one of the right angle heads listed below; Universal Motor, Operates on A.C. or D.C.

Standard Voltage—110; also available for 32, 220 or 250 volts

Right Angle Head Specifications

Head No.		Code
No. **200**	½" Sq. Shank for Snap-on & Blackhawk-Type Socket	**171-200**
No. **201**	7/16" A.F. Hex Socket 9/32" Dia. x ⅞" Deep Clearance Hole	**171-201**
No. **202**	⅜" Sq. Shank for Snap-on & Blackhawk-Type Socket	**171-202**
No. **250**	7/16" Hex Chuck for Screwdriver Bits and Socket Wrenches	**171-250**
No. **300**	½" Sq. Shank for Snap-on & Blackhawk-Type Socket	**172-300**
No. **301**	½" A.F. Hex Socket, ½" Dia. x ⅞" Deep Clearance Hole	**172-301**
No. **302**	¾" A.F. Hex Socket, ½" Dia. x ⅝" Deep Clearance Hole	**172-302**

Price, for all voltages, with one of above heads **$122.00**

Special Speeds—350 or 700 R.P.M. ..... **$2.50 extra**
Reversing Switch ..... **$10.00 extra**

See pages 23 and 24 for Screwdriver Bits and Socket Wrenches.

No. 22 Electric Screw Driver and Wrench

THIS unit has greater power, improved mechanism and better balance and is capable of handling constant production work in either wood or metal, screw driving, nut tightening, or construction work, automobile and body work, ship building, railway car building and repair, machinery assembly and crating. Addition of reversing switch greatly expands the uses of this unit for dis-assembling repair work and preparing "knock-down" shipments.

For greater strength and service, the switch handle is integral with field case and removable commutator covers afford easy access for inspection and cleaning. Gear and field housings are assembled with through bolts for added strength and to facilitate inspection.

NO. 22
SCREW-DRIVER & WRENCH

Specifications

Capacity in hardwood . . . No. 16x3¼" screw
Lag screw capacity . . . up to 5/16"x4"
Nut Running capacity . . . up to ⅜" diam.
No-load Speed . . . 500 R.P.M.
Weight: Net . . . 9 lbs.; Shipping . . . 12 lbs.
Overall Length (not including bit) . . . 14¼"
Standard Equipment—Quick-change chuck, with 7/16" hex socket; 13° positive clutch; 3-conductor cable and attachment plug (3rd wire for grounding); and one each No. 10 and No. 14 standard bits with centering sleeves; automatic-release switch with locking pin for optional use. Universal Motor, Operates on A.C. or D.C.
Standard Voltage—110; also available for 32, 220 or 250 volts.

Price, complete for all voltages (Code No. 54) **$72.00**
Special Speeds—750, 1,000 or 1,600 R.P.M. ..... **extra $2.50**
Reversing Switch .... **extra $10.00** No. 121 Bench Drill Stand* **$16.00**

*Note: No. 22 Screwdriver nose must be turned to fit this stand.

No. 22 Right Angle Adjustable Screw Driver and Wrench

BY adding the advantages of the right-angle drive to the No. 22 Screwdriver and Wrench, limited clearance, "corner" work and other obstacles to the efficient use of the straight drive unit are entirely overcome. An adjustable clutch and seven interchangeable heads are available, adapting the tool to a wider range of Nut Running and Screwdriving applications.

NO. 22
RIGHT ANGLE
ADJUSTABLE
SCREW-DRIVER
AND WRENCH

Specifications

Capacity: Screwdriving . . . No. 16x3¼" screw
Lag screw . . . up to 5/16"x4"
Nut running . . . up to ⅜" diam.
Standard No-load speed . . . 500 R.P.M.
Overall length . . . 20¼"
Weight: Net . . . 14 lbs.; Shipping . . . 18 lbs.
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); special geared end with adjustable clutch and one of the right angle heads listed below; automatic release switch; Universal Motor Operates on A.C. or D.C.
Standard Voltage—110; also available for 32, 220 or 250 volts.

Right Angle Head Specifications

Head No.		Code
No. 200	½" Sq. Shank for Snap-On & Blackhawk-Type Socket	166-200
No. 201	7/16" A.F. Hex Socket, 9/32" Dia. x 5/8" Deep Clearance Hole	166-201
No. 202	⅜" Sq. Shank for Snap-On & Blackhawk-Type Socket	166-202
No. 250	7/16" Hex Chuck for Screw Driver Bits and Socket Wrench	166-250
No. 300	½" Sq. Shank for Snap-On & Blackhawk-Type Socket	167-300
No. 301	½" A.F. Hex Socket, ½" Dia. x ⅞" Deep Clearance Hole	167-301
No. 302	¾" A.F. Hex Socket, ½" Dia. x 5/8" Deep Clearance Hole	167-302

Price, for all voltages with one of the above Heads $140.00
Special Speeds—350 or 700 R.P.M. ..... **$2.50 extra**
Reversing Switch ..... **$10.00 extra**

See pages 23 and 24 for Screwdriver Bits and Socket Wrenches

BLACK & DECKER

NO. 32
NUT RUNNER

No. 32 Electric Nut Runner

RUGGED construction of housings and all working parts fit this unit for heavy-duty production work.

Pin type clutch in spindle automatically disengages when driving pressure is released.

Instant release switch improves control; insures safety.

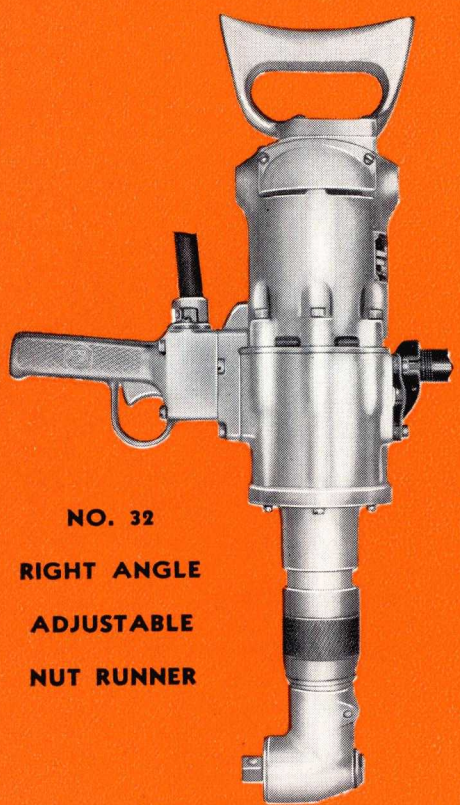
A completely new unit for driving wood screws, lag screws and running up nuts and bolts. Assembling metal frames, shelving, partitions, conveyors, stairways, etc. Erecting scaffolding, concrete forms, etc. Crating and lagging down heavy machinery for shipment. Assembly and maintenance on trucks, buses, railway cars, etc.

With reversing switch, assembling and disassembling units that are shipped "knocked down."

Specifications

Capacity: Wood Screws . . . up to No. 20x4" long
Lag Screws . . . up to ⅜"x4½" long
Nuts and Bolts . . . up to ½" diameter
No-load Speed . . . 500 R.P.M.
Weight: Net . . . 22½ lbs.; Shipping . . . 28 lbs.
Overall Length (not including bit) . . . 19½"
Standard Equipment—3-wire cable and plug (3rd wire for grounding); "quick-change" chuck (7/16" hex.); spade handle; side pipe handle; instant-release switch with locking pin for optional use. One hex. socket wrench, ⅝" a.f. Universal Motor, Operates on A.C. or D.C.
Standard Voltage—110; also available for 220 or 250 volts.

Price, complete for all voltages (Code No.55) **$94.00**
Special Speeds—350, 700 or 900 R.P.M. **$2.50**
Attachments—Reversing Switch **$15.00**



NO. 32
RIGHT ANGLE
ADJUSTABLE
NUT RUNNER

No. 32 Right Angle Adjustable Nut Runner

THE combination of adjustable clutch and right-angle drive, available on the No. 32 Nut Runner, makes convenient a number of operations that are difficult with a straight-drive tool. A sturdy production unit, specially popular on body and chassis assembly where a light compact tool with ample power for nut tightening is required. This unit can also be supplied with either side switch handle (standard) or end switch handle (optional).

Specifications

Capacity: Screwdriving . . . up to No. 20x4" long
Lag Screws . . . up to ⅜"x4½" long
Nuts and Bolts . . . up to ½" diameter
No-load Speed . . . 500 R.P.M.
Weight: Net . . . 28½ lbs.; Shipping . . . 38 lbs.
Overall length . . . 24½"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); special geared end with adjustable clutch and one of the right angle heads listed below; spade handle, side switch handle and pipe handle. Universal Motor Operates on A.C. or D.C.
Optional Equipment—End switch handle can be supplied if desired, no extra charge.
Standard Voltage—110; also available for 220 or 250 volts.

Right Angle Head Specifications

Head No.		Code Numbers With Side Switch Handle	With End Switch Handle
400	½" Sq. shank for Snap-on and Blackhawk Socket	248-400	182-400
405	½" Sq. Shank for Snap-on and Blackhawk Socket	248-405	182-405
450	¾" A.F. Hex Socket, 17/32" Dia. x 1 19/64" deep Hole	248-450	182-450
451	⅝" A.F. Hex Socket, 7/16" Dia. x 1¾" deep Hole	248-451	182-451
452	9/16" A.F. Hex Socket, 7/16" Dia. x 1¾" deep Hole	248-452	182-452

Price, for all voltages with any one of above Heads except No. 405 ..... **$165.00**

With No. 405 Head (dead spindle) **$170.00**
Special Speeds—350, 700 or 900 R.P.M. ..... **$2.50 extra**
Reversing Switch ..... **$15.00 extra**

See pages 23 and 24 for Screwdriver Bits and Socket Wrenches.

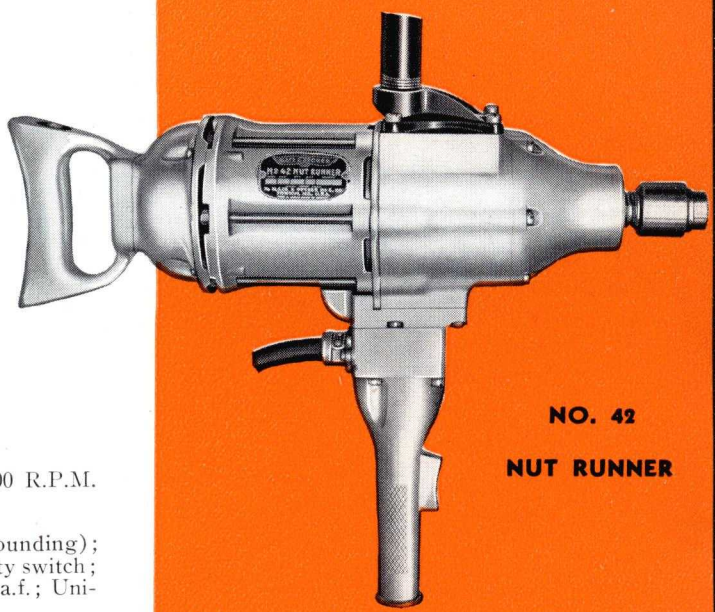
No. 42 Electric Nut Runner

SENSITIVE pin-type clutch insures more uniform work and gives longer service under constant use. Clutch disengages when forward pressure is released.

Automatic safety switch in side handle cuts out instantly when operator's grasp is released.

A completely new, heavy-service unit, for heavy-duty lag-screw driving and nut running on all types of production and maintenance.

Especially adapted to marine and railway construction, and in steel fabricating plants. Structural steel work, bridge, pier and building construction. Installing cranes, elevators, conveyor lines, etc. Erecting forms, moulds, scaffolding, etc.



NO. 42
NUT RUNNER

Specifications

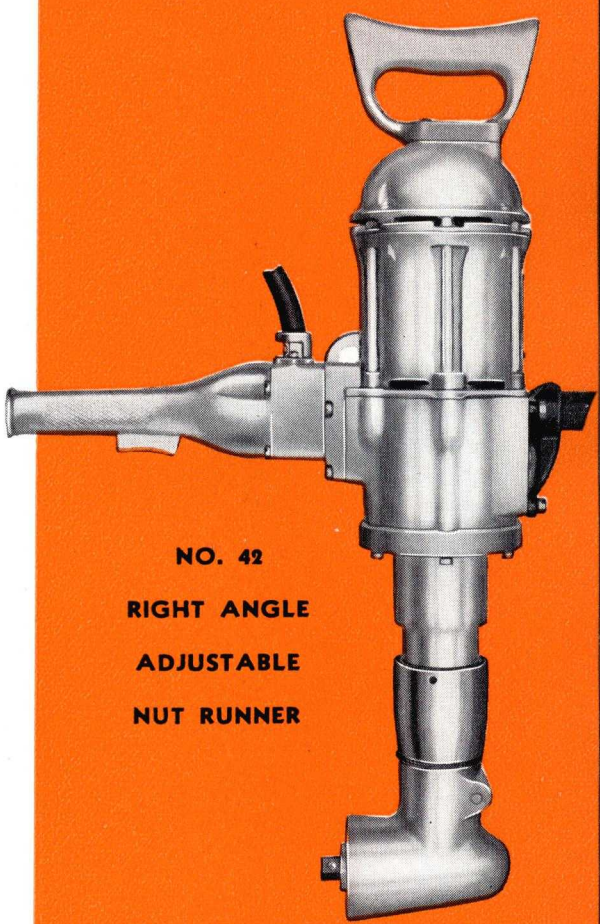
Capacity—Lag Screws . . . up to ½" x 5½" long
Nuts and Bolts . . . up to ⅞" diameter; No-load Speed . . . 500 R.P.M.
Weight: Net . . . 31 lbs.; Shipping . . . 44 lbs.
Overall Length (not including wrench) . . . 21¾"
Standard equipment—3-wire cable and plug (3rd wire for grounding); "quick-change" chuck (⅝" hex.); side switch handle with safety switch; spade handle; side pipe handle; one hex. socket wrench, ⅞" a.f.; Universal Motor, Operates on A.C. or D.C.
Standard Voltage—110; also available for 220 or 250 volts.

Price, complete for all voltages (Code No. **56**) **$120.00**
Special Speeds: 350, 700 or 900 R.P.M. $2.50
Attachments—Reversing Switch $15.00

No. 42 Right Angle Adjustable Nut Runner

THE No. 42 Nut Runner has been vastly increased in adaptability by the addition of the adjustable clutch and right-angle drive. A great saving in operator-fatigue is accomplished by absorbing most of the torque of the unit in the right-angle head. Designed for heavy duty service in driving nuts and bolts up to ⅞" diameter.

Can be furnished with side switch handle (standard) or end switch handle, (optional).



NO. 42
RIGHT ANGLE
ADJUSTABLE
NUT RUNNER

Specifications

Capacity: Lag Screws . . . up to ½" x 5½" long
Nuts and Bolts . . . up to ⅞" diameter
No-load Speed . . . 500 R.P.M.
Weight: Net . . . 52½ lbs.; Shipping . . . 65 lbs.
Overall length . . . 28¾"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); special geared end with adjustable clutch and one of the right angle heads listed below; spade handle, side switch handle and pipe handle; Universal Motor Operates on A.C. or D.C.
Optional Equipment—End switch handle can be supplied if desired, no extra charge.
Standard Voltage—110; also available for 220 or 250 volts.

Right Angle Head Specifications

Head No.		Code Numbers With Side Switch Handle	With End Switch Handle
500	½" sq. shank for Snap-on or Blackhawk Socket	185-500	252-500
501	⅝" sq. shank for Snap-on or Blackhawk Socket	185-501	252-501
505	¾" sq. shank for Snap-on or Blackhawk Socket	185-505	252-505
525	⅝" A.F. Hex Socket	185-525	252-525
526	¾" A.F. Hex Socket	185-526	252-526
527	¾" A.F. Hex Socket	185-527	252-527
528	⅞" A.F. Hex Socket	185-528	252-528

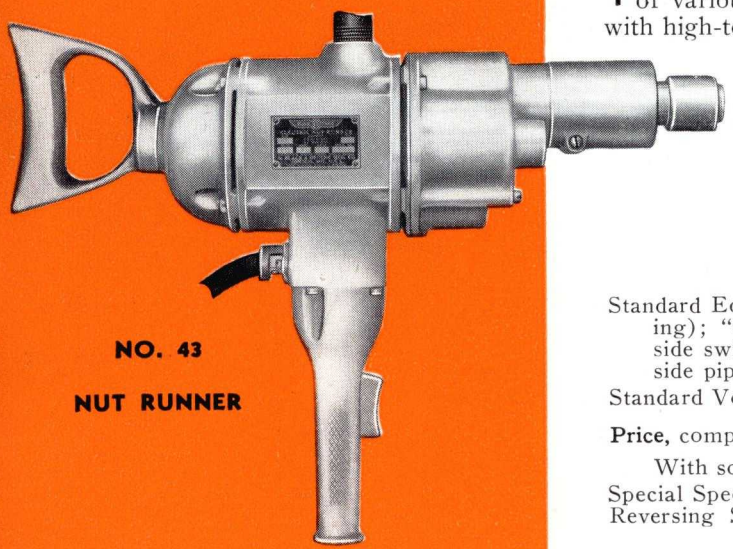
Price, for all voltages with any one of above Heads except No. **505** **$205.00**

With No. **505** Head (dead spindle) **$215.00**
Special Speeds—350, 700 or 900 R.P.M. ..... **$2.50 extra**
Reversing Switch ..... **$15.00 extra**

See page 23 for Socket Wrenches.

BLACK & DECKER

No. 43 Electric Nut Runner



NO. 43
NUT RUNNER

THE new No. 43 Nut Runner has been introduced to take care of various nut running applications requiring a low-speed tool with high-torque. This unit can be supplied with solid spindle and ¾" Jacobs geared chuck, for slow speed drilling up to ¾", for use with large size Hole Saws when drilling in stainless steel and Monel metal and slow speed reaming.

Specifications

Capacity: Lag Screw . . . up to ¾" x 6" long
Nuts and Bolts . . . up to 1" diameter
Speed: No-load 90 R.P.M.; Full-load 45 R.P.M.
Weight: Net . . . 30¾ lbs.; Shipping . . . 38 lbs.
Overall length: 22¾"

Standard Equipment—3-conductor cable and plug (3rd wire for grounding); "quick-change" chuck with ⅝" hex socket; spade handle, side switch handle with automatic-release switch with locking pin; side pipe handle. Universal Motor operates on either A.C. or D.C.

Standard Voltage—110; also available for 220 or 250 volts.

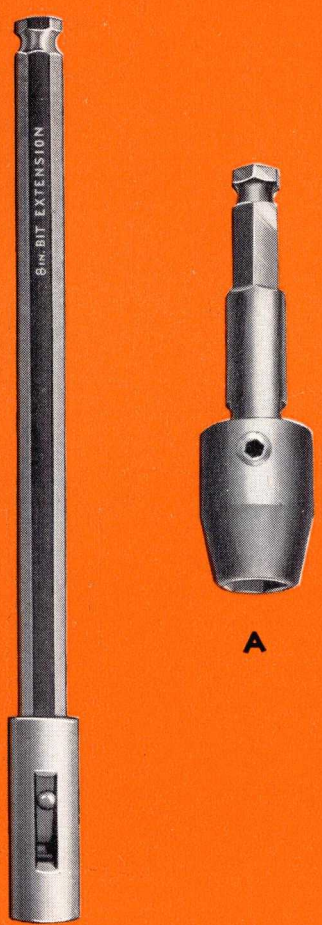
Price, complete for all voltages (Code No. 245) **$130.00**

With solid spindle and ¾" chuck for drilling **$145.00**

Special Speeds—175 and 275 R.P.M. .....$ 5.00 extra
Reversing Switch ..... 15.00 "

Socket Wrenches

SOCKET Wrenches for No. 12 and 22 Screw Drivers, and for No. 32 Nut Runner have standard 7/16" hex shanks. For No. 42 and No. 43 Nut Runners, the shanks are ⅝" hex. The sockets are available with either square or hexagon openings. Standard projecting length of wrench is 2½".



B

A

Socket Size	Socket Only		With Standard Shank		With 4" Shank		With 6" Shank	
	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price	Cat. No.	Price
¼"	70008	$ .75	70108	$2.00	71108	$3.00	72108	$3.00
9/32"	70009	.75	70109	2.00	71109	3.00	72109	3.00
5/16"	70010	.75	70110	2.00	71110	3.00	72110	3.00
11/32"	70011	.75	70111	2.00	71111	3.00	72111	3.00
3/8"	70012	.75	70112	2.00	71112	3.00	72112	3.00
13/32"	70013	.75	70113	2.00	71113	3.00	72113	3.00
7/16"	70014	.75	70114	2.00	71114	3.00	72114	3.00
15/32"	70015	.75	70115	2.00	71115	3.00	72115	3.00
½"	70016	.75	70116	2.00	71116	3.00	72116	3.00
17/32"	70017	.75	70117	2.00	71117	3.00	72117	3.00
9/16"	70018	.75	70118	2.00	71118	3.00	72118	3.00
19/32"	70019	1.00	70119	2.25	71119	3.25	72119	3.25
5/8"	70020	1.00	70120	2.25	71120	3.25	72120	3.25
21/32"	70021	1.00	70121	2.25	71121	3.25	72121	3.25
11/16"	70022	1.00	70122	2.25	71122	3.25	72122	3.25
23/32"	70023	1.00	70123	2.25	71123	3.25	72123	3.25
¾"	70024	1.00	70124	2.25	71124	3.25	72124	3.25
25/32"	70025	1.25	70125	2.50	71125	3.50	72125	3.50
13/16"	70026	1.25	70126	2.50	71126	3.50	72126	3.50
27/32"	70027	1.25	70127	2.50	71127	3.50	72127	3.50
7/8"	70028	1.25	70128	2.50	71128	3.50	72128	3.50
29/32"	70029	1.25	70129	2.50	71129	3.50	72129	3.50
15/16"	70030	1.25	70130	2.50	71130	3.50	72130	3.50
31/32"	70031	1.25	70131	2.50	71131	3.50	72131	3.50
1"	70032	1.25	70132	2.50	71132	3.50	72132	3.50
Shank Only	.....	...	70000	1.00	71000	2.00	72000	2.00

In ordering specify whether square or hexagon opening and whether 7/16" or ⅝" hex shank is required. Complete wrenches or separate shanks can also be supplied with shank lengths of 8", 10", 12", 14", 16", 20" or 24". Prices on application.

Socket Wrenches for Torsimeters

Socket Wrenches are available for use with Torsimeters, as follows. Separate shanks, of ¼" hex. size, and in 2" and 6" overall lengths, with ¼" square ends to fit removable socket heads of various sizes.

Cat. No.	Item	Price Each
20510	¼" hex. Shank, 2" long	$1.00
20511	¼" hex. Shank, 6" long	1.50
20512	¼" hex. socket	.45
20513	9/32" hex. socket	.45
20514	5/16" hex. socket	.45
20515	11/32" hex. socket	.45
20516	⅜" hex. socket	.45
20517	7/16" hex. socket	$0.45
20518	½" hex. socket	.50
20519	¼" double square socket	.45
20520	5/16" double square socket	.45
20521	11/32" double square socket	.50
20522	⅜" double square socket	.50
20546	7/16" double square socket	.55

Screw Driver Bits for use with Phillips Head Screws

(for use with Torsimeter and Nos. 12 and 22 Screwdrivers and No. 32 Nut Runner)

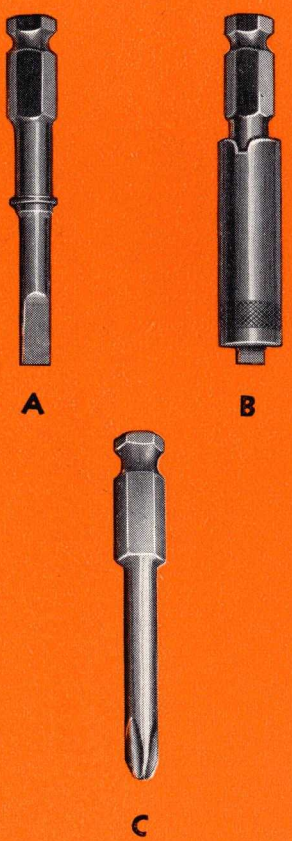
A SPECIAL bit (Fig. C) is required for driving the Phillips head screw, which has the cross form slot instead of the conventional slot. The Phillips head screws have four different sizes of slot arrangement, being designated as Nos. 1, 2, 3 and 4, from the smallest size to the largest size. A number of sizes of screws are covered by any one driving slot size, as indicated in Table No. 1 below. Bits available are No. 1 and No. 2 driving slot sizes with ¼" hex shank, for the Torsimeter; and the No. 1, No. 2, No. 3 and No. 4 driving slot sizes with 7/16" hex shank for use with the No. 12, No. 22 and No. 32 units (See Table 2.)

Table No. 1

Type of Screw		Slot No. 1	Slot No. 2	Slot No. 3	Slot No. 4
Wood Screws	Flat and Oval Head	Diam. No. 4 and Smaller	No. 5 to No. 9	No. 10 to No. 16	No. 18 and Larger
	Round Head	Diam. No. 4 and Smaller	No. 5 to No. 10	No. 11 to No. 16	No. 18 and Larger
Machine Screws	Flat, Oval and Fillister Head	Diam. No. 4 and Smaller	No. 4 to No. 10	No. 12 to 5/16"	3/8" and Larger
	Round Head	Diam. No. 5 and Smaller	No. 6 to No. 10	No. 12 to 5/16"	3/8" and Larger
Stove Bolts	Flat, Oval and Fillister Head	.....	1/8" to 3/16"	1/4" and 5/16"	3/8" and 1/2"
	Round Head	Diam. 1/8"	5/32" and 3/16"	1/4" and 5/16"	3/8" and 1/2"
Self-tapping Screws	Flat, Oval and Low Fillister Head	Diam. No. 4	No. 5 to No. 10	No. 12 to No. 14	.....
	Round Head	Diam. No. 4 and No. 5	No. 6 to No. 12	No. 14	.....

Table No. 2

Slot Size	Cat. No.	Unit Used with	Price Each	Price Each				
				Lot of 5*	Lot of 50*	Lot of 100*	Lot of 500*	Lot of 1000*
No. 1 ¼" hex. shank	17922	Torsimeter	$0.90	$0.75	$0.55	$0.50	$0.40	$0.35
No. 1 7/16" hex. shank	18938	Nos. 12 and 22 S.D. No. 32 N.R.	1.25	.90	.75	.70	.60	.55
No. 2 ¼" hex. shank	17923	Torsimeter	.90	.75	.55	.50	.40	.35
No. 2 7/16" hex. shank	17924	Nos. 12 and 22 S.D. No. 32 N.R.	1.25	.90	.75	.70	.60	.55
No. 3 7/16" hex. shank	17925	Nos. 12 and 22 S.D. No. 32 N.R.	1.25	.90	.75	.70	.60	.55
No. 4 7/16" hex. shank	17926	Nos. 12 and 22 S.D. No. 32 N.R.	1.25	.90	.75	.70	.60	.55



Standard Screw Driver Bits

for Nos. 12 and 22 Screw Drivers and No. 32 Nut Runner only

Standard Bits (Fig. A) are equipped with 7/16" hexagon shanks to fit chucks of the above units, and are available in sizes 4, 6, 8, 10, 12, 14, 16, 18, and 20 to drive flat head screws of corresponding sizes. (For Round Head Screws, use next smaller size bit.) All standard bits can be equipped with centering sleeves (Fig. B) which guide the bit into the screw slot. Various length shanks are available for special operations. Lengths indicated are *projecting lengths,* from chuck to end of bit, *not* over-all lengths.

Length of Bit	Bit No. 4	Bit No. 6	Bit No. 8	Bit No. 10	Bit No. 12	Bit No. 14	Bit No. 16	Bit No. 18	Bit No. 20	Price each	Price Box of 5*	Sizes 6, 8, 10, 12 and 14 only 50 Lot*	100 Lot*	500 Lot*	1000 Lot*
	CATALOG NUMBERS OF BITS WITHOUT CENTERING SLEEVES														
2½"	5104	5106	5108	5110	5112	5114	5116	5118	5120	$1.00	$3.50	$.55	$.50	$.40	$.35
4"	15049	15053	15057	15061	15065	15069	15073	15077	15081	1.20	4.20	.65	.60	.50	.45
6"	15050	15054	15058	15062	15066	15070	15074	15078	15082	1.30	4.55	.70	.65	.55	.50
8"	15051	15055	15059	15063	15067	15071	15075	15079	15083	1.40	4.90	.75	.70	.60	.55
10"	15052	15056	15060	15064	15068	15072	15076	15080	15084	1.50	5.25	.80	.75	.65	.60
	CATALOG NUMBERS OF BITS WITH CENTERING SLEEVES														
2½"	5345	5346	5330	5343	5344	5329	5364	5366	5369	1.50	5.25	.80	.75	.60	.50
4"	15085	15089	15093	15097	15101	15105	15109	15113	15117	1.70	5.95	.90	.85	.70	.60
6"	15086	15090	15094	15098	15102	15106	15110	15114	15118	1.80	6.30	.95	.90	.75	.65
8"	15087	15091	15095	15099	15103	15107	15111	15115	15119	1.90	6.65	1.00	.95	.80	.70
10"	15088	15092	15096	15100	15104	15108	15112	15116	15120	2.00	7.00	1.05	1.00	.85	.75

Bit Extensions

(Fig. B on opposite page)

Screw Driver Bit Extensions are available in various lengths, with 7/16" shank to fit Screw Driver Chuck, and a chuck socket to take standard bits and socket wrenches. These Extensions greatly reduce bit replacement costs, where long bits are needed.

Length of Extension	Catalog Number	Price each	Box of 5*	50 Lot*	100 Lot*
4"	15023	$1.15	$4.90	$.75	$.70
6"	14989	1.25	5.30	.80	.75
8"	5287	1.35	5.75	.85	.80
10"	5288	1.50	6.40	.95	.90

Quantity prices apply only on designated quantities, all of one size.

See Page 17 for Torsimeter Bits and Accessories.

BLACK & DECKER

No. 22 Electric Tapper

NO. 22 TAPPER

A COMPLETELY redesigned unit, with increased motor power over former model, for industrial use where production tapping must be done on pieces too large or heavy to handle in a machine tapper.

Tapping operations are performed with this unit eight times faster than by hand. Automatic reversing mechanism backs the tap out of the threaded hole at high speed when operator pulls backward. No reversing switch is needed. The use of this unit will greatly reduce tap breakage.

Universal motor operates on either alternating or direct current.

Applications—Threading holes in steel, cast iron, brass or aluminum. Especially adapted to installation and maintenance work on pipe lines, heating and lighting systems, steel shelving, partitions, etc.

Widely used in production in metal fabricating, cabinet, commercial body and elevator plants.

Ideal for flue rolling on brass or copper flues of ¾" and ⅞" diameters.

Has wooden side handle to help take the torque in using larger size taps and gives this improved tool better balance and control.

Specifications

Tapping Capacity: ⅜" in cast iron; ¼" in steel; ½" in brass or aluminum

No-load speed (tapping) . . . 300 R.P.M.; Overall length . . . 15¾" Weight: Net . . . 10½ lbs.; Shipping . . . 14 lbs.

Standard Equipment—3-conductor cable and plug (3rd wire for grounding); ⅜" Jacobs chuck and key; automatic-release switch and locking pin, wooden side handle. Universal Motor, operates on A.C. or D.C.

Standard Voltage—110. Also available for 32, 220 and 250 volts, no extra charge.

Price, complete for all voltages (Code No. **90**) **$85.00**

with special tap-holding chuck **$90.00**

Special Speeds, 500, 700 or 1,200 R.P.M. ..... **$5.00 extra**

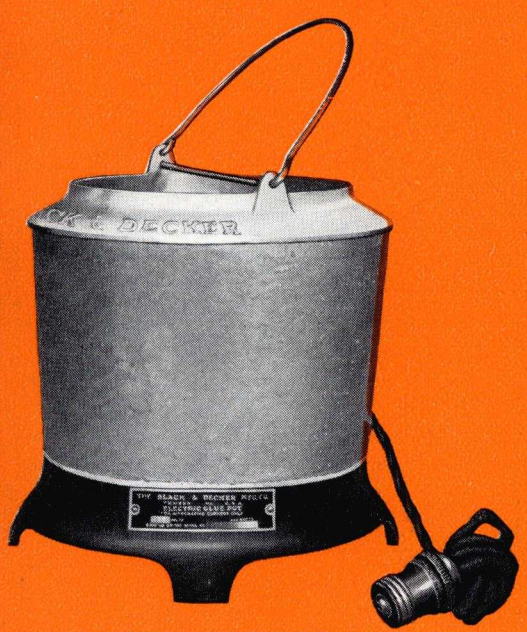
No. **121** Bench Stand **$16.00**

No. 20454 Jacobs Tap-holding Chuck (for larger taps) **$9.00**

Recommended Tap Drill Sizes

Tap Size	Drill Size	Tap Size	Drill Size	Tap Size	Drill Size	Tap Size	Drill Size
4-40	42	5/16-18	17/64	4-48	40	5/16-24	9/32
6-32	36	3/8-16	21/64	6-40	31	3/8-24	11/32
8-32	28	7/16-14	25/64	8-36	27	7/16-20	13/32
10-24	20	1/2-13	7/16	10-32	18	1/2-20	15/32
12-24	12	9/16-12	1/2	12-28	11	9/16-18	17/32
1/4-20	3	5/8-11	9/16	1/4-28	2	5/8-18	19/32

Best results can be obtained with spiral point taps.



ELECTRIC GLUE POT

Electric Glue Pot

THERMOSTATIC control is designed to bring the temperature of the glue up to 150° Fahrenheit rapidly, and to maintain it at that temperature without variation of more than 5°. Experience has shown that glue works best at 150° Fahrenheit.

Nichrome heating element hermetically sealed and protected against moisture and foreign substance.

Cast aluminum glue pot is carefully machined to fit in the water jacket, conserving heat and reducing current consumption.

Equipped with convenient carrying handle and heavy iron brush wiper.

Applications—Ideal for use in book binderies, printing plants, furniture and cabinet factories, toy factories, piano factories, etc.

Especially designed for continuous use where maintenance of constant working temperature is important.

Specifications—Capacity of glue container 2 quarts.
Net weight 11½ lbs.; Shipping weight 13 lbs.

Furnished complete with nichrome heating element, iron water pot, cast aluminum glue pot, 2-wire cable and plug.

Supplied for either 110 volts or 220 volts, alternating current only; **not for D.C.**

Price, complete for either voltage (Code No. **89**) **$19.50**

Electric Valve Shop

THIS complete group of modern, precision reconditioning equipment makes valve reconditioning a profitable service for any shop.

1. A Super-Service (Wet or Dry Grinding) Refacer, with sensational features of precision; described on next two pages.
2. Double ball-bearing spindle; outer end for valve stem grinding.
3. Accurate Vibro-Centric Stone Dressing Stand permanently mounted on cabinet.
4. Adjustable lamp lives ample light for all operations.
5. Large work-top; ample room for hand tools, etc.
6. Large storage drawer for Vibro-Centric Stones, Sleeves, Pilots, Carbon Brushes, Guide Cleaners; plenty of room for extra equipment.
7. Strong hasp provides means of locking drawer.
8. Removable valve tray on each side of cabinet. Capacity 16 valves.
9. Cabinet of heavy-gauge welded steel. Bright red finish—chromium trim.
10. Enclosed storage space for Vibro-Centric Driver, drills, tools, gaskets, parts, etc.; two large doors.
11. 4″ rubber-tired casters; ball bearing swivel type.
12. Cabinet is wired with 4 outlets for Refacer, Vibro-Centric Driver, drills, hand lamps, etc.
13. 20 feet of 3-wire cable connects all outlets to one current source.
14. Dimensions: overall height 58″; width 28½″; depth 20½″.
    Shipping Weight—Complete Valve Shop .....330 lbs.
    Cabinet only .....140 lbs.

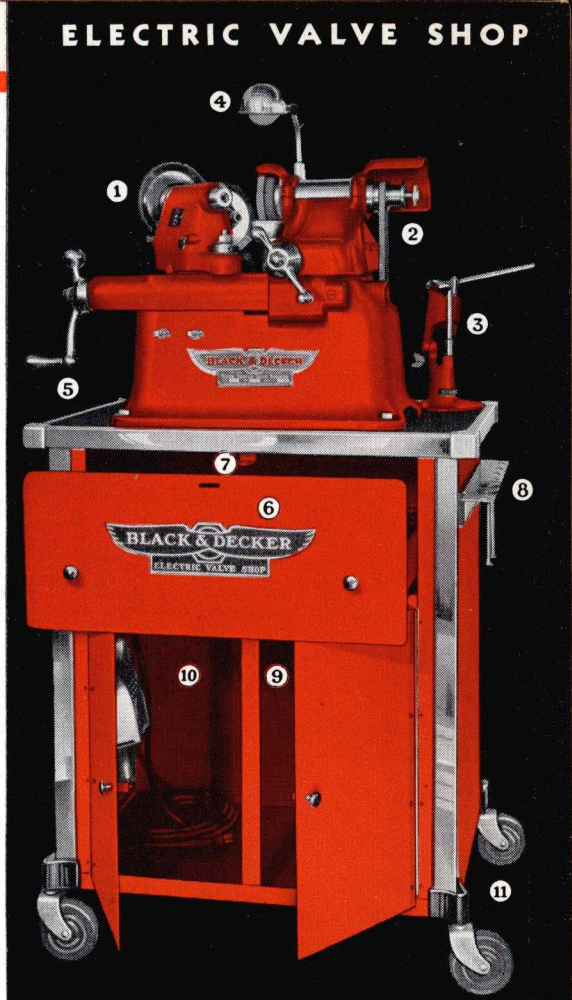
Specifications

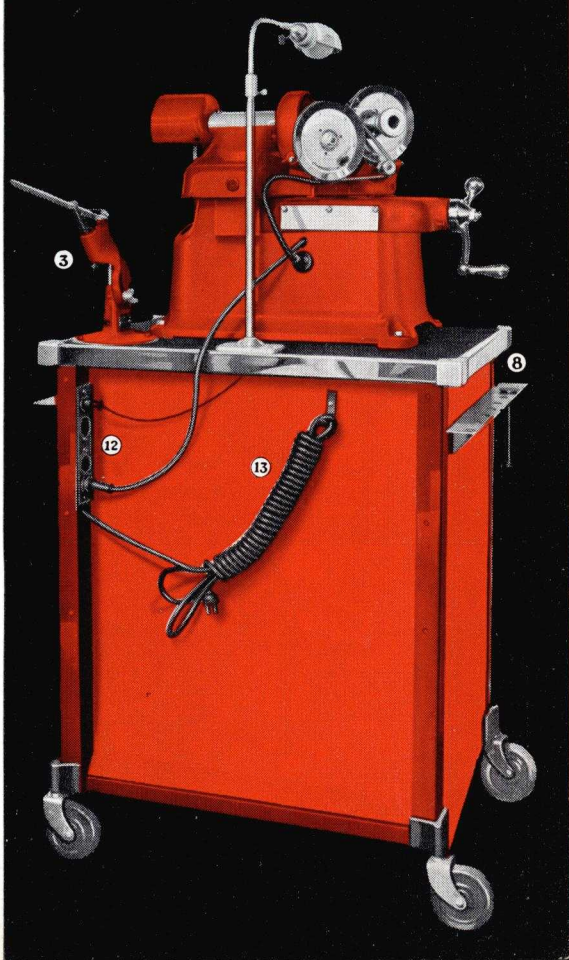
1 Super-Service Wet Grinding or Standard Refacer (see below)
1 Valve Shop Cabinet, complete (as above)
1 Vibro-Centric Valve Seat Grinder Driving Unit
1 Vibro-Centric Stone Dressing Stand
3 Valve Guide Cleaners—151 (5/16″); 152 (3/8″); 153 (7/16″)
2 Carbon Cleaning Brushes—102 (Heavy Duty); 771 (Side Flare)
2 No. 14048 Vibro-Centric Stone Sleeves
5 Self-Centering Pilots: 14425 (5/16″); 14426 (11/32″); 14427 (3/8″); 14435 (Ford A); 14155 (Ford V-8)
2 Hard Seat Stones: 14049 (1¾″—45°); 14109 (1¾″—20°)
7 Soft Seat Stones: 14084 (1½″—45°); 14063 (1⅝″—45°); 14085 (1¾″—45°); 14086 (1⅞″—45°); 14087 (2⅛″—45°); 14198 (1½″—30°); 14090 (1¾″—30°)
1 Finishing Stone: 14384 (1¾″—45°)
Motors—All motors in Refacer and Driving unit are universal and operate on either A.C. or D.C.
Standard Voltage—110; also available for 220 or 250 volts.

Prices of Complete Electric Valve Shop—

with 9/16″ Super-Service Wet Grinding Refacer	(Code **281-VS**)	**$335.00**
with 5/8″ Super-Service Wet Grinding Refacer	(Code **282-VS**)	**345.00**
with 9/16″ Standard Super-Service Refacer	(Code **106-VS**)	**320.00**
with 5/8″ Standard Super-Service Refacer	(Code **107-VS**)	**330.00**

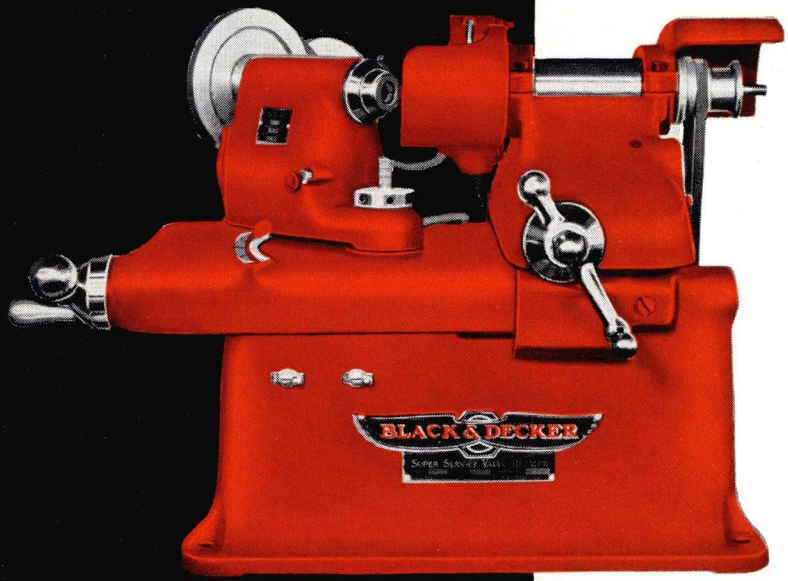
Price—Valve Shop Cabinet only (Code **108**) $52.00





WET GRINDING VALVE REFACER

BLACK & DECKER



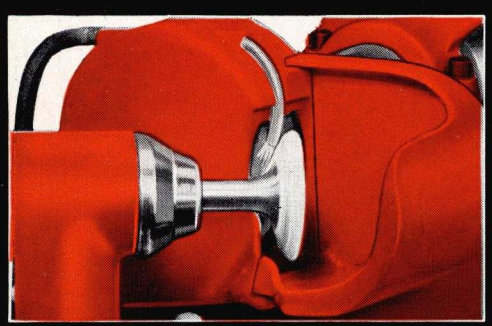
Super-Service Wet Grinding Valve Refacer

A PRECISION valve grinding machine that combines the three fundamental requirements of modern valve refacing equipment—speed of operation, an unusually smooth finish on the valve face, and absolute accuracy in the completed job.

The Super-Service WET GRINDING Valve Refacer increases the speed of grinding, because it reduces grinding heat and prevents burning, thus permitting the operator to make heavier cuts. It produces an absolutely smooth, mirror-like surface on the valve face, comparable to the finest tool-room results.

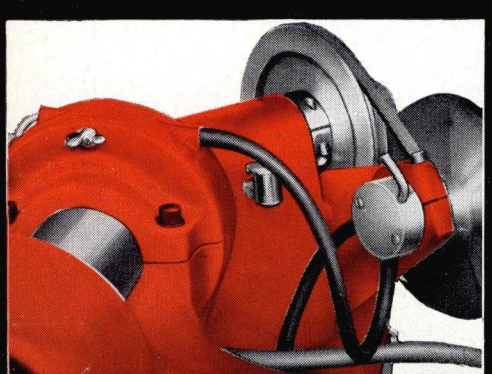
The Wet Grinding mechanism consists of solution tank, mounted on the rear of the Refacer base, and divided into two compartments; two tubes are fitted into the tank cover, one drawing the filtered solution from the smaller compartment, the other tube returning used fluid to the larger compartment for filtering. "Neoprene" tubing connects the tank to a simple pump which is an integral part of the work motor pulley, and carries the solution from the pump to a tube in a special wheel-guard which directs a steady stream onto the wheel just above the valve. A removable splash-guard on the front of the wheel-guard prevents loss of fluid and protects operator and refacer. A return-trough in the bottom of the wheel-guard carries the solution through tubing back to the settling compartment of the tank, where dirt settles out before the solution is used again.

Other features of this new unit are the same as found in the Standard Super-Service Refacer, including **Super-Power** with two universal motors, independently driving collet and wheel spindles; **Super-Speed Feed Screws** with improved bearing construction; **Super-Sensative Slides** with 3-point bearing suspension of feed tables; and **Super-Service Grinding Spindle** of improved ball-bearing construction and double-ended to provide for stem grinding.



WET GRINDING OPERATION

REAR VIEW—SOLUTION TANK



PUMP AND PULLEY ASSEMBLY

Specifications

Capacity—9/16" Refacer (one collet) . . . (9/32"-9/16")
5/8" Refacer (two collets) . . . (9/32"-1 1/16")

Angle Adjustment . . . 0° to 90°.

Weight: Net . . . 148 lbs.; Shipping . . . 173 lbs.

Standard Equipment—2 Universal motors with pulleys and V-belts; 3-wire cable and plug (3rd wire for grounding); one 4" grinding wheel; one wheel dresser and V-block with diamond; one solution tank with cover and "Neoprene" tubing; one wet-grinding wheel-guard and splash-guard, one Allen set-screw wrench.

Standard Voltage—110; also available for 220 or 250 volts.

Price—9/16" Super-Service WET GRINDING Refacer **(Code 281)**

(Complete with one collet, 9/32"-9/16") **$190.00**

5/8" Super-Service WET GRINDING Refacer **(Code 282)**

(Complete with 2 collets, 9/32"-9/16" and 1/2"-1 1/16") **$200.00**

BLACK & DECKER

Standard Super-Service Valve Refacer

IMPORTANT refinements in design and construction now offer you greater precision, smoother operation and more accurate valve grinding results, in the already popular Super-Service Refacer.

1. Improved feed-screw bearing construction in the work table and wheel head, to further insure against sideplay and provide perfectly smooth operation of the feed screws.
2. Ball-bearing wheel spindle of unit construction, for smoother grinding and correct alignment.
3. Improved base mounting of wheel motor automatically maintains uniform belt tension at all positions of wheel table.
4. A completely re-designed Micrometer Valve Stem Grinding Attachment, with perfect alignment and accurate feed. Designed for all Ford valves, including the new V8-60 and for truing Ford tappets. (Not standard equipment. See complete description on next page.)

In addition to these important improvements, the Super-Service Refacer also retains its original features of construction and service, as:—

Super Power—from two universal motors, independently driving the collet spindle and grinding wheel for abundant, smooth power.

Super-Speed Feed Screw—combining the accuracy of screw feed with the speed of lever feed.

Super-Sensitive Slides—3-point bearing suspension of feed tables achieves a sensitive, smooth slide action, so important to accurate, high-finish valve grinding. This construction eliminates periodic gib adjustment and insures permanent accuracy.

Super-Service Grinding Spindle—Extended, double-end wheel spindle permits use of Micrometer Attachment, or grinding wheel on outer end of spindle without disturbing the refacing set-up.

Specifications

Capacity—The Super-Service Valve Refacer is available in either 9/16" capacity, with one collet (9/32"-9/16") for handling most passenger car and light truck valves, including Ford A and V-8; or in 5/8" capacity, with two collets, (9/32"-9/16" and 1/2"-11/16") for all passenger car, truck, tractor and airplane engine valves.

Angle Adjustment—The work-head is easily adjusted and marked for any angle from 0° to 90°.

Motors—are universal, operating on either direct or alternating current.

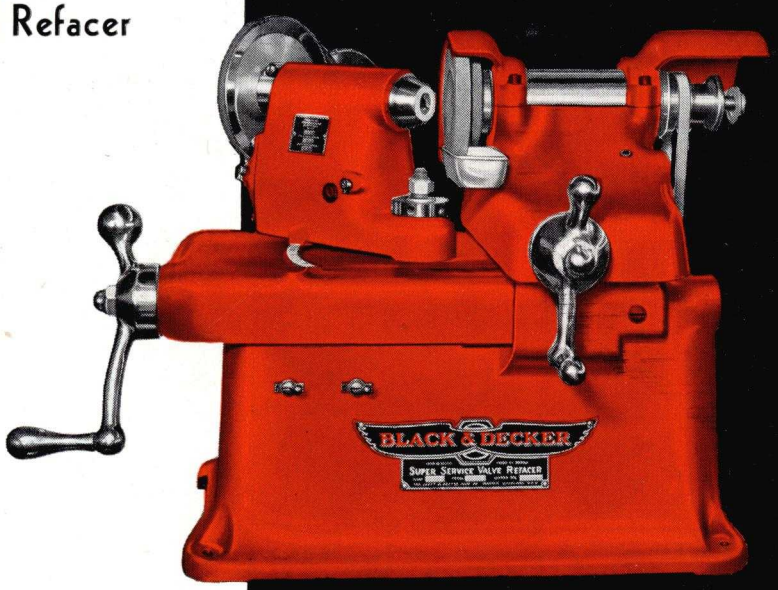
Standard Voltage—110; also available for 220 or 250 volts.

Standard Equipment—2 universal motors, pulleys and V-belts; one 4" grinding wheel for hard valves; one combination diamond wheel-dresser and V-block; Allen set-screw wrench; one dust pan; and 3-wire cable with attachment plug.

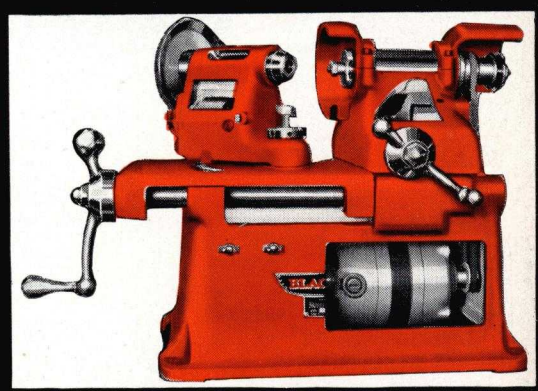
Net weight . . . 143 lbs.; Shipping Weight . . . 168 lbs.

Price—9/16" Super-Service Refacer, complete with one collet (9/32"-9/16") **(Code 106)** **$175.00**

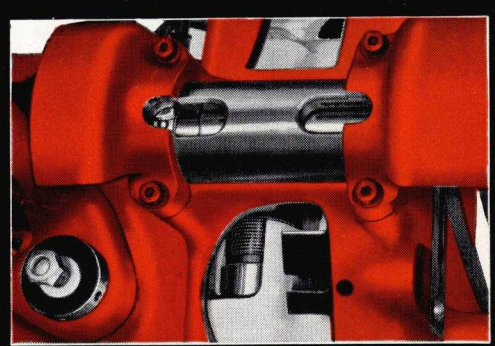
5/8" Super-Service Refacer, complete with two collets (9/32"-9/16", and 1/2"-11/16") **(Code 107)** . **$185.00**



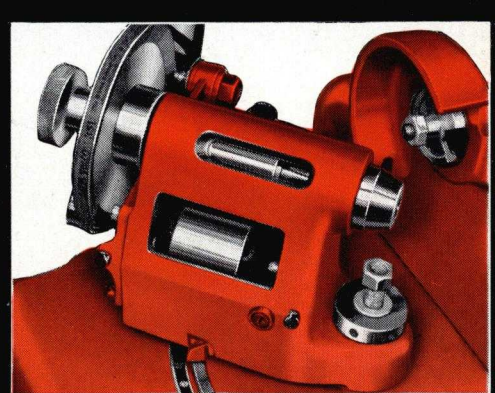
SUPER-SERVICE VALVE REFACER



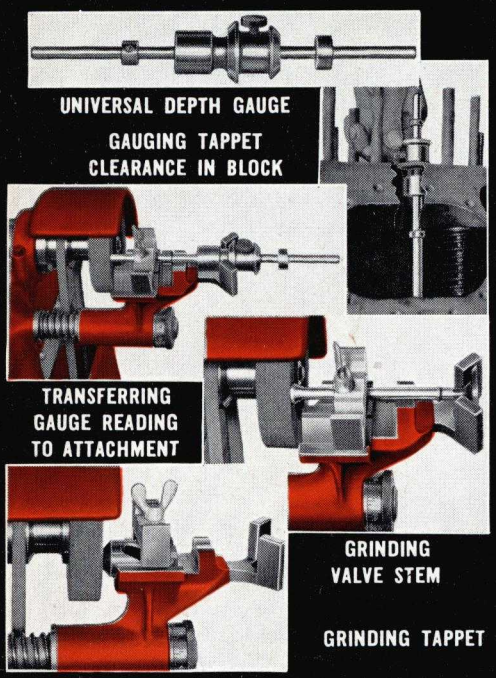
SUSPENDED MOTOR—RAPID FEED-SCREW



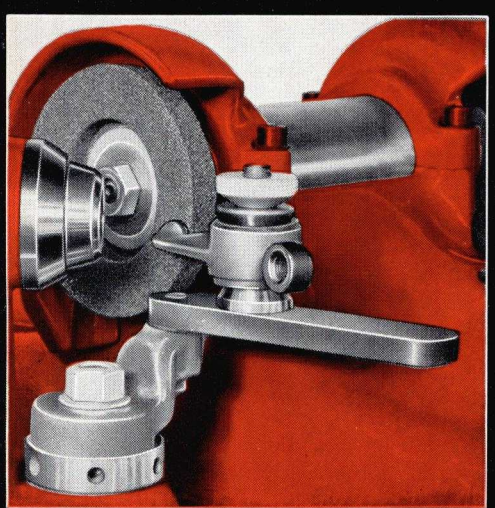
BALL-BEARING SPINDLE



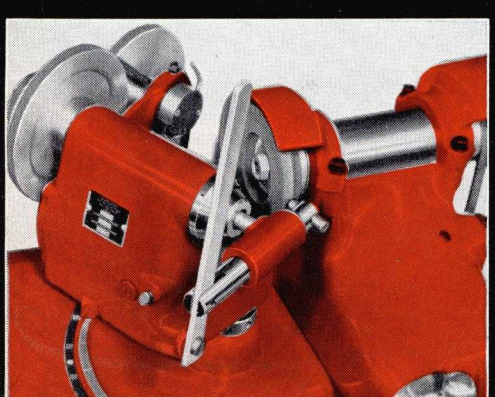
SEPARATE SPINDLE MOTOR—TWIN-GRIP COLLET



VALVE STEM GRINDING ATTACHMENT



ROCKER ARM GRINDING ATTACHMENT



WHEEL DRESSER FOR FLAT VALVES

BLACK & DECKER

Attachments and Accessories for Super-Service Refacers

Micrometer Valve Stem Grinding Attachment

A re-designed "universal" attachment, for obtaining exact tappet clearance on all Ford valves and other valves not having tappet adjustments. Saves hours of guess work. The complete attachment consists of:

A "universal" depth gauge with correct sizes of valve head and bushings for Ford A, V8-85 and V8-60.

A "universal" V-block and clamp bracket, with adjustable V-stop, adapted to varying head sizes and stem lengths. The clamp bracket also holds tappets for grinding and truing.

A sensitive micrometer feed, clearly calibrated in thousandths, mounted on a carefully machined bar, which fits in wheel spindle housing.

A special recessed wheel, trued across the flat face to insure proper squaring of stems and tappets.

No. **18252** Complete Micrometer Attachment as detailed above. . **$19.50**

Rocker Arm Grinding Attachment

With this device, a set of rocker arms can be refaced in a few minutes, removing the hollows caused by wear and promoting quiet tappet operation.

No. **12277** Attachment for Super-Service Refacers **$8.00**

Breaker Point Grinding Attachment

Consists of a series of fixtures for refacing nearly all types of breaker points.

No. **11338** Attachment for ½" Collet, ⅝", 1", 2" and Super-Service Refacers **$12.00**

For Grinding 90° Valves

A special wheel and wheel-dressing attachment are available for the Super-Service Refacers, to facilitate the grinding of 90° (flat) valves. The attachment is used to dress a 30° angle on the wheel.

No. **19898** 90° Dressing Attachment, and wheel **$6.50**
No. **19897** Special Wheel for 90° Valves (as above) **2.75**

Replacement and Special Refacer Wheels

No. **VR-533** Standard 4" Wheel for hard valves **$2.75**
No. **16371** Special 4" Wheel for stellite valves **2.50**
No. **15295** 4" Recessed Wheel for Micrometer Attachment **3.50**

Replacement and Special Refacer Equipment

No. **18325** Standard Collet (9/32"-9/16" cap.) **$8.00**
No. **15200** Standard Collet (½"-11/16" cap.) **10.00**
No. **16953** Special Collet for short valve stems (¼"-7/16" cap.)..... **8.00**
No. **17745** Special Collet for short valve stems (½"-11/16" cap)....**10.00**
No. **13297** Wheel Dresser and V-block without Diamond **2.25**
No. **5574** Diamond and Nib for all Wheel Dressers **3.00**
No. **16167** V-Belt for Wheel Spindle ..... **.75**
No. **16286** V-Belt for Work (Collet) Spindle ..... **.50**
No. **820** Refacer Pedestal with work tray and valve rack **28.00**

"VIBRO-CENTRIC" Valve Seat Grinding Method

A "UNIVERSAL" Grinder which equips any garage or service station to recondition valve seats on any type of car at a profit. Restores perfect accuracy and mirror-finish to hard steel and stellite inserts and to cast-iron seats in a fraction of "cutter" time.

A positive vibrating action, built into the driver spindle, "lifts" the grinding stone from the seat once each revolution, clearing the stone by centrifugal force. This prevents loading of the stone, speeds up grinding and reduces stone wear.

High speed, concentric grinding, at 12,000 R.P.M. Cuts entire circumference of valve seat at once. Very little metal is removed, practically eliminating the narrowing operation.

Simplicity of operation. All seats are ground dry. No complicated adjustments or "rigging" are required. Self-centering Pilots cover a wide range of over-and-under sizes. Stones are quickly interchanged on the sleeves.

"Vibro-Centric" Driving Unit

A new Driver, with increased working clearance, better balance, improved motor and bearing construction and automatic-release switch. Positive vibrating action built into the spindle.

Specifications—Spindle speed . . . 12,000 R.P.M.; Net Weight . . . 6 lbs.; Shipping Weight . . . 7 lbs. Universal motor operates on A.C. or D.C. Standard Equipment—3-conductor cable and plug (3rd wire for grounding); safety trigger switch. Standard Voltage—110; also available for 32, 220 or 250.

Price, complete for all voltages (Code No. **115**) **$38.00**

Stone Dressing Stand

For truing and reconditioning Vibro-Centric Stones.

Specifications—Angle adjustment . . . 0° to 45°; Net weight . . . 6 lbs.; Shipping weight . . . 6¾ lbs. Standard equipment—Diamond point, adjustable feeding arm; ⅜" diam. mandrel with micrometer vertical feed.

No. **14188** Stone Dressing Stand, complete $20.00
No. **14558** Special mandrel; for No. **14560** Sleeve 2.25
No. **5574** Diamond Point, only 3.00

Standard Vibro-Centric Set

This Set is the basis on which to build complete Vibro-Centric equipment for all garage and service requirements.

Standard Set consists of—1 Vibro-Centric Driving Unit
1 Stone Dressing Stand
2 Standard Stone Sleeves

Net weight . . . 13½ lbs.; Shipping weight . . . 17 lbs.

Price, complete for all voltages (Code No. **116**) **$66.00**

Universal Vibro-Centric Kit

A COMPLETE assortment of all equipment necessary for valve seat reconditioning, grouped in standardized kit. Kit contains the standard Vibro-Centric set, together with proper sizes of Self-Centering Pilots and Vibro-Centric Stones to recondition most of the popular cars from 1930 to 1938. The kit box, made of heavy oak in attractive natural finish, holds the complete outfit with definite storage space for each item. Especially suited to the general repair shop.

Universal Kit—**Price,** complete (Code No. **117-UN**) **$98.00**

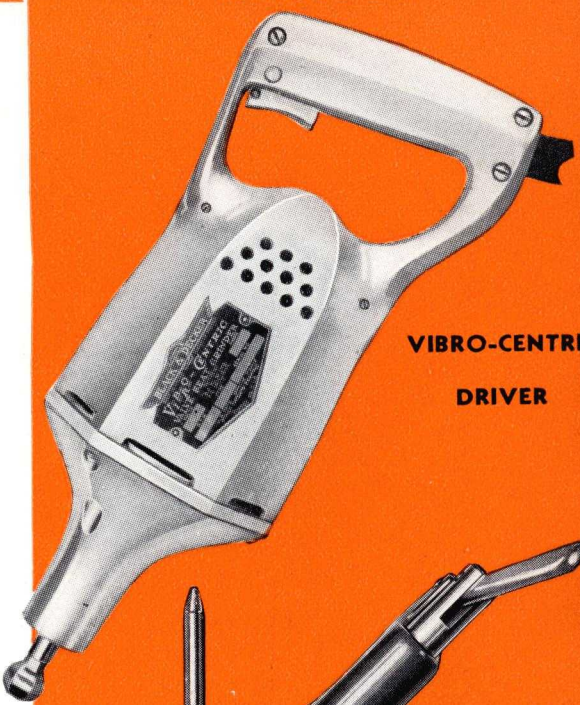
1 Standard Vibro-Centric Set (Driver, Stand, 2 Sleeves).
5 Self-Centering Pilots: **14425** (5/16"); **14426** (11/32"); **14427** (⅜"); **14435** (Ford A); **14155** (Ford V-8).
2 Hard Seat Stones:* **14049** (1¾"-45°); **14109** (1¾"-20°).
7 Soft Seat Stones:* **14084** (1½"-45°); **14063** (1⅝"-45°); **14085** (1¾"-45°); **14086** (1⅞"-45°); **14087** (2⅛"-45°); **14198** (1½"-30°); **14090** (1¾"-30°).
1 Finishing Stone:* **14384** (1¾"-45°).
1 Vibro-Centric Kit Box. (Shipping Weight 35 lbs.)

*Any 10 standard stones may be substituted for above assortment.

Vibro-Centric Kit Box, only (Code No. **117**) $9.00
(Shipping Wt. 16 lbs.)

Vibro-Centric Stones, Self-Centering Pilots and Accessories are on Pages 31 to 34.

VALVE SEAT GRINDER

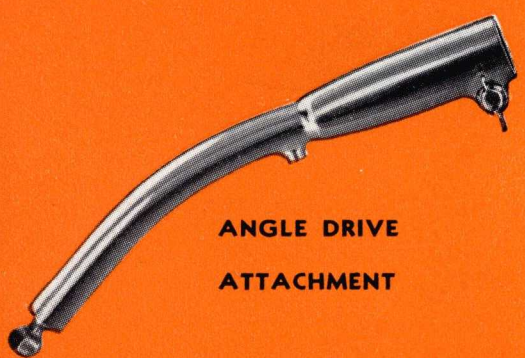


VIBRO-CENTRIC DRIVER

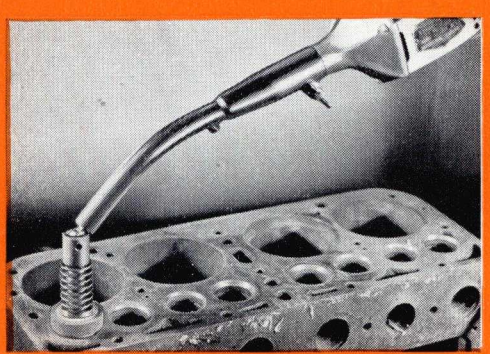
STONE DRESSING STAND

VIBRO-CENTRIC KIT

AIRCRAFT SEAT GRINDER



ANGLE DRIVE ATTACHMENT



BLACK & DECKER

Aircraft "VIBRO-CENTRIC" Valve Seat Grinder

FOR perfect performance, air craft engines must be reconditioned frequently, and hand methods consume a tremendous amount of time. Vibro-Centric has reduced valve-seat grinding labor by several hours on the average engine, at the same time increasing precision to a marked degree.

The Vibro-Centric Driving Unit has a positive vibrating action built permanently into the spindle; "lifts" the stone from the seat and throws off particles that would quickly load the stone. Specifications on Page 30.

Price, complete for all voltages **$38.00**

The Stone Dressing Stand speeds up accurate dressing of stones and quickly restores fresh cutting surface at exact angle, without unnecessary waste of stone material. Specifications on Page 30.

Price, complete **$20.00**

The Angle Drive Attachment, which fits the turned nose of the Driver, reaches the most inaccessible seats, and keeps the Driver **outside** the cylinder. See listing below.

Self-Centering Pilots provide a rigid axis for the operation of seat-grinding stones. Complete listing of standard and special Aircraft Self-Centering Pilots on Page 33.

Vibro-Centric Stones provide the proper material for grinding any type of seat material. Complete lists of Vibro-Centric Stones and Stone Sleeves on Page 32.

Aircraft Vibro-Centric Kit

The Aircraft Kit contains the basic Vibro-Centric units, around which complete valve seat reconditioning equipment for any make or group of airplane engines can be built. Because of the variation in pilot and stone sizes needed in this field, we do not include any set assortment of stones and pilots in the kit. When ordering, add the price of stones and pilots required to the price of the kit; or supply us with specifications of the engines to be serviced and we will submit a recommended assortment.

Aircraft Vibro-Centric Kit, complete (Code No. 117-UNA) **$85.00**

Contents: 1 Vibro-Centric Driving Unit: 1 Dressing Stand: 2 Standard Stone Sleeves; 1 Angle Drive Attachment; 1 Kit Box.

Net weight . . . 32½ lbs.; Shipping weight . . . 36 lbs.

Angle Drive Attachment

For Use with Vibro-Centric Driver

IN some of the new cars, where the dash panel or other obstruction extends over the rear portion of the engine block, it is difficult to reach the last valve seat or operate the Driver at the most efficient angle. The Angle Drive Attachment is the answer to this problem. This Attachment is also indispensable in aircraft engine work, where the valve seats have to be reached through the cylinder. The Angle Drive Attachment consists of a flexible shaft operating in a metal sleeve which is gradually curved to an angle of about 30°. The upper end of the sleeve is split and enlarged to fit around the turned nose of the Driver, and held tightly around the nose with a wing nut. The upper end of the flexible shaft is fitted with a hexagon socket in which the hex-ball of the Driver spindle seats; the lower end is fitted with a hexagon ball, similar to the Driver spindle. The vibrating action of the Driver is transmitted through this floating shaft to the grinding stone without loss of vibrating efficiency. **Note: The Driver nose must be turned down to fit this Attachment. Specify when ordering with Driver.**

No. 16745 Angle Drive Attachment, complete **$13.00**

Net weight . . . 1½ lbs.; Shipping Weight . . . 2 lbs.

Vibro-Centric Stone Sleeves

A VERY light-weight stone sleeve, designed for use with the Vibro-Centric Method, to facilitate the important vibrating action of the Driver. Upper end of sleeve fitted with hexagon socket which forms a universal joint with spindle of the Driver. Lower end is threaded to take Vibro-Centric Stones. Long bronze bushing is accurately reamed to fit Black & Decker Self-Centering Pilots. Two standard Stone Sleeves are furnished with the Standard Vibro-Centric Set and with all Vibro-Centric Kits.

Cat. No.		Price
14048	Standard Vibro-Centric Stone Sleeve to fit Black & Decker Self-Centering Pilots	$4.00
14559	Special Sleeve to fit long Pilots of Standard ⅜" diam.	5.00
14560	Special Sleeve to fit long Pilots of .010" oversize diam.	5.00

STONE SLEEVE

Vibro-Centric Valve Seat Stones

MADE especially for grinding by the Vibro-Centric Method. Stones are available in three grades—one for grinding cast-iron and soft steel seats; another for hard steel and stellite inserts; and a third for super-polishing either type of seat after grinding. The finishing stone is only necessary where a high-lustre finish is desired. All stones have threaded steel inserts which screw directly on the end of the stone sleeve; this insures accuracy and facilitates changing stones.

For best results with the Vibro-Centric Method, it is important to use proper size and grade of stone for various types of seats and inserts. See Specification table below.

VIBRO-CENTRIC STONE

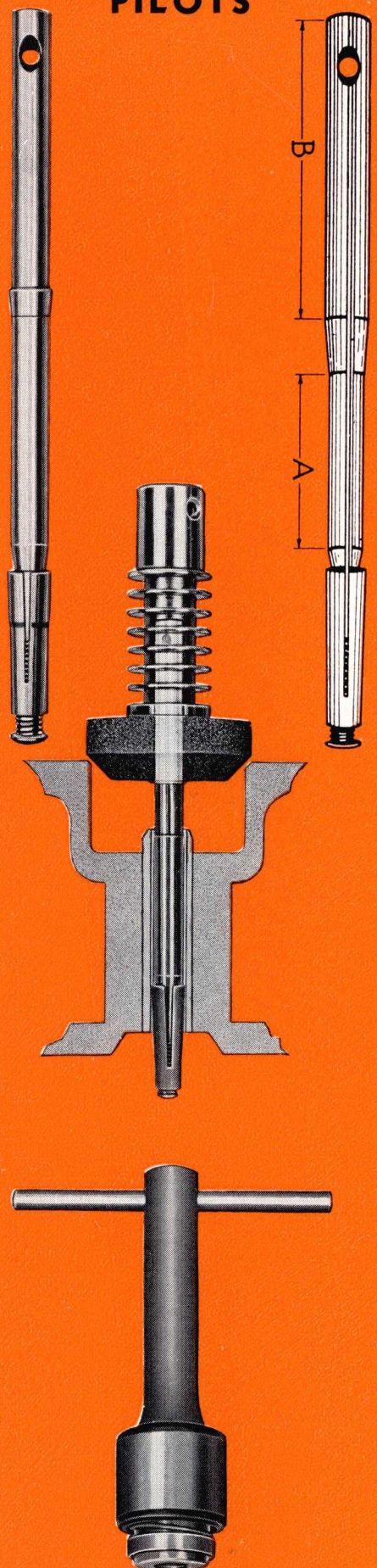
Valve and Valve Seat Specifications

New and complete 1938 Valve and Valve Seat Specifications now available, specifying correct sizes of Self-Centering Pilots and "Vibro-Centric" Stones for Valve Seat Reconditioning on passeger cars, trucks and busses, motor cycles, stock, marine and diesel motors, tractors, aircraft engines, farm lighting plants, etc.

Vibro-Centric Stone Specifications

Size	For Soft Steel and Cast Iron			For Hard Steel and Stellite				For Finish-Grinding		Price Each
	45° Cat. No.	30° Cat. No.	20° Cat. No.	45° Cat. No.	90° Cat. No.	30° Cat. No.	20° Cat. No.	45° Cat. No.	30° Cat. No.	
1¼"	14216	14197	.....	14217	.....	14218	.....	14414	14413	$2.00
1⅜"	18541	.....	.....	18540	.....	.....	.....	18542	.....	2.00
1½"	14084	14198	14092	14056	.....	14219	14107	14382	14370	2.00
1⅝"	14063	14199	14093	14100	.....	14287	14108	14383	14371	2.00
1¾"	14085	14090	14094	14049	.....	14105	14109	14384	14372	2.00
1⅞"	14086	14268	14095	14101	.....	14288	14110	14385	14373	2.00
2"	14064	14091	14096	14102	15892	14106	14111	14386	14374	2.00
2⅛"	14087	14278	14097	14103	.....	14289	14112	14387	14375	2.50
2¼"	14088	14279	14098	14104	15893	14290	14113	14388	14376	2.50
2⅜"	16929	.....	.....	16951	.....	.....	.....	.....	.....	2.50
2½"	14089	14280	14099	14050	.....	14291	14114	14389	14377	2.50
2⅝"	14285	14281	14274	14239	15894	14292	14270	14390	14378	3.00
2¾"	14153	14282	14275	14200	.....	14293	14271	14391	14379	3.00
2⅞"	14286	14283	14276	14295	.....	14269	14272	14392	14380	3.00
3"	14154	14284	14277	14243	.....	14294	14273	14393	14381	3.00
3⅛"	.....	16971	.....	.....	.....	16970	.....	.....	.....	3.50

SELF-CENTERING PILOTS



PILOT WRENCH

BLACK & DECKER

Self-Centering Pilots

BLACK & DECKER Self-Centering Pilots provide an accurate, rigid axis for the operation of Vibro-Centric Stones, and Valve Seat Cutters. The Pilot has two accurately machined tapers, one at the top which fits into the top of the valve guide, and one at the bottom, on which a split sleeve expands into the lower end of the guide. The expanding feature is important in compensating for worn guides; also eliminates a large stock of "oversize" pilots, as Self-Centering Pilots expand from .020" to .030".

Standard Self-Centering Pilots

Cat. No.	Nominal Size	Range	Dimensions A	Dimensions B	Price
14423	1/4"	.233"–.254"	1 1/16"	2 5/16"	$4.00
14424	17/64"–9/32"	.262"–.283"	1 1/16"	2 5/16"	4.00
14425	5/16"–21/64"	.308"–.339"	1 5/16"	3"	4.00
14426	11/32"–23/64"	.339"–.370"	1 17/32"	3 1/4"	4.00
14427	3/8"–25/64"	.371"–.394"	1 17/32"	3 1/4"	4.00
14428	13/32"–27/64"	.402"–.424"	1 29/32"	3 1/4"	4.00
14429	7/16"–29/64"	.433"–.455"	2 1/4"	3 1/4"	4.00
14430	15/32"–31/64"	.464"–.495"	2 5/32"	3 13/32"	4.00
14431	1/2"–17/32"	.496"–.535"	2"	3 5/8"	4.00
14432	9/16"–19/32"	.558"–.598"	2"	3 1/4"	4.00
14433	5/8"–21/32"	.621"–.661"	2"	3 5/8"	4.00
15178	11/16"–23/32"	.683"–.724"	2"	3 5/8"	5.00
16221	3/4"–25/32"	.746"–.786"	2"	3 5/8"	5.00
14435	Ford Model A				4.00
14155	Ford V-8, 85 H.P. Plug Pilot (Range 1.0300-1.0335)				4.00
19434	Ford V-8, 85 H.P. Plug Pilot (Range 1.0285"-1.032")				4.00
18248	Ford V-8, 60 H.P. Plug Pilot				4.00
14518	Pilot Removing Pin				.20

Special Self-Centering Pilots

DESIGNED specially for latest automobile and aircraft engines, such as Wright, Pratt & Whitney, LeBlond, Kinner and Continental; also adapted to certain special automobile engines. Variance from Standard Pilots is indicated in table; range is same as standard, except where shown. When ordering, give make and model of engine, or furnish complete valve and seat specifications.

Cat. No.	Nominal Size	Dimensions A	Dimensions B	Price
16147	1/4"	1 1/16"	2 5/16"	$6.00
15792	9/32"–19/64"	1 3/16"	3 1/2"	6.00
		(Range: .277"-.303")		
16197	5/16"–21/64"	1 1/32"	4"	6.00
18608	5/16"–21/64"	1 5/32"	2 1/2"	6.00
16199	11/32"–23/64"	1 1/32"	3 1/4"	6.00
16952	11/32"–23/64"	1 1/32"	2 1/4"	6.00
18479	11/32"–23/64"	1 1/32"	1 7/8"	6.00
16201	3/8"–25/64"	1 1/32"	3 1/4"	6.00
16204	3/8"–25/64"	1 17/32"	4 1/2"	6.00
16207	3/8"–25/64"	2 5/32"	3 1/4"	6.00
17001	25/64"	1 25/32"	3 1/4"	6.00
		(Range: .387"-.403")		
17396	13/32"–27/64"	1 13/32"	3 1/4"	6.00
18481	13/32"–27/64"	1 13/32"	2"	6.00
16826	13/32"–27/64"	1 29/32"	4 1/4"	6.00
16206	27/64"	1 5/32"	3 1/4"	6.00
		(Range: .418"-.434")		
15179	7/16"–29/64"	2 1/4"	4 1/2"	6.00
15743	7/16"–29/64"	2 1/4"	5 1/4"	6.00
16784	7/16"–29/64"	1 3/4"	3 1/4"	6.00
17275	7/16"–29/64"	1 1/4"	2 1/4"	6.00
16999	15/32"–31/64"	1 25/32"	3 9/32"	6.00
17643	1/2"–17/32"	1 1/2"	3 1/16"	6.00
18485	1/2"–17/32"	1 1/2"	2 3/4"	6.00
16047	1/2"–17/32"	2"	4 5/8"	6.00
16786	1/2"–17/32"	1 1/2"	3 5/8"	6.00
18477	9/16"–19/32"	1 1/2"	2 3/16"	6.00
15656	9/16"–19/32"	2"	5"	6.00
16788	9/16"–19/32"	1 1/2"	3 5/8"	6.00
18483	5/8"–21/32"	1 1/2"	2 5/8"	6.00
18006	5/8"–21/32"	1 1/2"	3 1/16"	6.00
17000	5/8"–21/32"	1 3/4"	3 5/8"	6.00
18242	11/16"–23/32"	2"	4 1/8"	7.50
18244	11/16"–23/32"	2"	5 1/4"	7.50

Complete Valve and Valve Seat Specifications, for Cars, Trucks, Busses, Tractors, Stock Engines, Airplane Engines, etc., now available.

Pilot Wrench

To prevent injury to user's hands while inserting or removing Self-Centering or other Pilots. Equipped with chuck which quickly grasps or releases the Pilot shank.

No. 19829 Pilot Wrench $4.50

Carbon Cleaning Tools

For use with 1/4" Electric Drill

Flexible Coupling

For Use with 1/4" Drill

Fitted with 1/4" shank to fit chuck of 1/4" Drill, and hexagon plug to fit stone-sleeve socket; to transmit power from drill to grinding stone. Used for grinding inaccessible seats on some model cars, and with Drill-Centric Sets.

No. **14411** Flexible Coupling, price **$1.30**

Valve Guide Cleaners

Made of spring wire set spirally about a stem and expanded to give heavy cleaning tension. A few strokes with this cleaner driven by a 1/4" drill thoroughly cleans and polishes the Valve Guide.

Cat. No.	Minimum Size	Maximum Size	Price	Cat. No.	Minimum Size	Maximum Size	Price
150	1/4"	to 9/32"	$1.15	154	1/2"	to 35/64"	$1.15
151	5/16"	to 23/64"	1.15	155	9/16"	to 39/64"	1.15
152	3/8"	to 27/64"	1.15	156	5/8"	to 43/64"	1.15
153	7/16"	to 31/64"	1.15	15125	Ford V-8		1.50

Valve Guide Brushes

Made of short tempered wire, spiraled like a gun cleaner. Used with 1/4" Drill this cleans and polishes Valve Guides.

No.	Size	Price	No.	Size	Price
7909	1/4"	$1.00	7913	13/32"	$1.00
7908	9/32"	1.00	7914	7/16"	1.00
7910	5/16"	1.00	7916	1/2"	1.00
7911	11/32"	1.00	7918	9/16"	1.00
7912	3/8"	1.00			

Carbon Removing Brushes

Made of tempered steel wire; used with 1/4" Drill, quickly clean carbon from cylinder heads, top of pistons, valve ports, etc., leaving a burnished surface.

68 Hollow core, flare bottom brush..... $ .95
771 Side flare brush for close corner work..... 1.50
102 Heavy duty solid wire-filled brush..... 1.50
108 Small brush for cleaning Valve-Guide Ports 1.25

Wire Wheel Brush

For cleaning valves, top of block, etc. Driven by 1/4" Drill. Compactly made with maximum amount of spring tempered wire.

704 4" Wire Wheel Brush $1.50
3071 Arbor to attach 4" brush to 1/4" Drill ..... .85
14657 Bench Stand for 1/4" Drill 2.75

No. 10 Valve Lapper

THE Valve Lapper has been redesigned for better balance, smoother lines and an increase of approximately 25% in motor output.

The spindle oscillates back and forth with a long steady sweep lapping valves in a fraction of the time formerly required by hand.

Bits of various shapes are provided to fit different style valves.

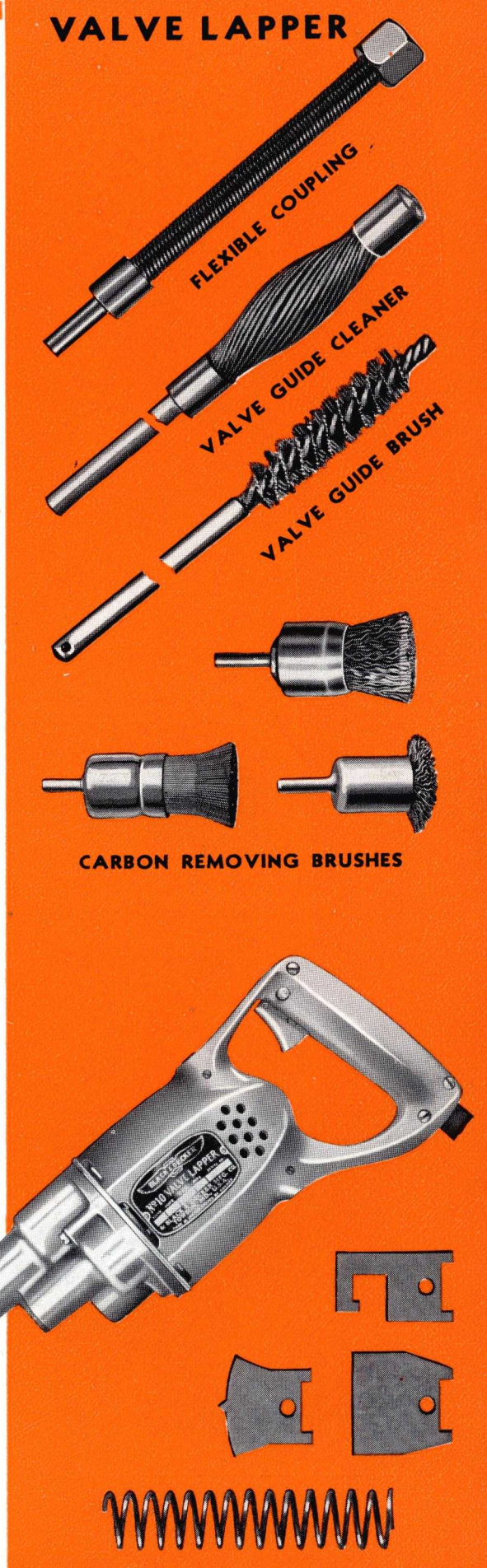
A lift spring placed under the head of the valve lifts it from the seat when pressure is not applied to the Lapper.

Universal motor operates on either alternating or direct current.

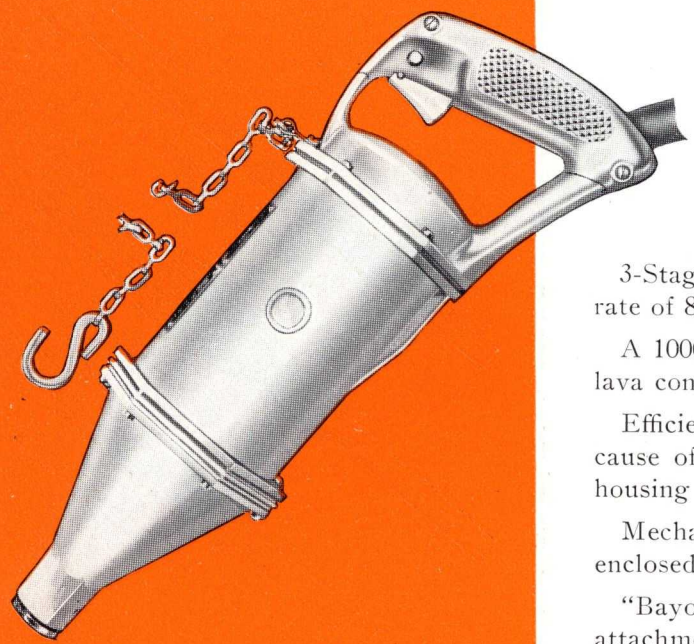
Specifications—Speed 500 oscillations a minute.
Weight: Net . . . 6¼ lbs.; Shipping . . . 8½ lbs.
Over-all length . . . 14"
Standard equipment—3-conductor cable with plug (3rd wire for grounding); 4 detachable bits for various types of valves, suction cup for plain valves and lift spring.
Standard voltage—110; also available for 32, 220 or 250 volts, no extra charge.

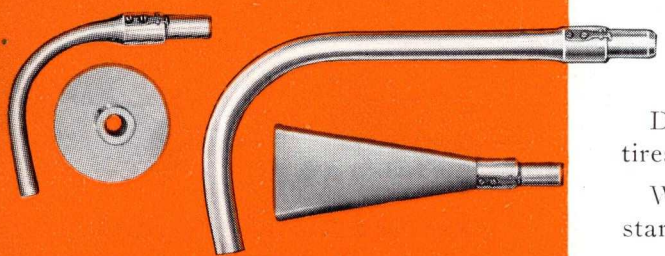
Price, all voltages (Code No. **118**) **$48.00**

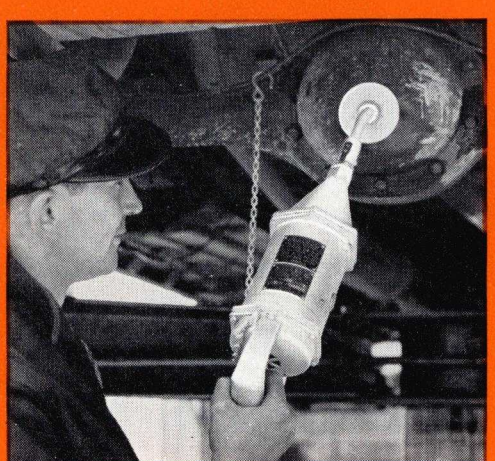
Accessories—No. **4065** Extension Spindle $2.50
No. **975** Lift Spring ..... .25
No. **974** Bit for valves with 3/4" center holes ..... .25
No. **973** Bit for slotted valves ..... .25
No. **1031** Bit for Buick Valves ..... .25
No. **1035** Blank Bit ..... .25
No. **6695** Suction cup for plain valves ..... .50



BLACK & DECKER







Electric Heat Gun

A COMPACT, portable unit for developing instantaneous, concentrated heat combined with a positive blowing action. Its use in lubricating service increases sale of new lubricant and speeds up greasing operations.

3-Stage centrifugal fan forces air through the nozzle at the rate of 8 cu. ft. per minute.

A 1000-watt Nichrome element, mounted on indestructable lava cone in nose, develops 400° F. maximum temperature.

Efficient operation with lower temperature is possible because of blowing action. Heating element is insulated from housing with asbestos sheathing.

Mechanism is completely protected from grease and dirt by enclosed housing.

"Bayonet" locking device on nose permits quick change of attachments.

Ball bearings on armature shaft.

Universal motor operates on alternating or direct current.

Especially designed for thawing frozen grease in transmissions and differentials; thawing radiators, water pumps, hose connections, spring shackles, etc.

Drying spark plugs, distributors and ignition wires; drying tires on brake-testing machines.

Warming carburetors before adjusting; warming cars before starting in very cold weather.

Quick drying of paint on touch-up work and repaint jobs.

Various drying and blowing operations in paper mills, printshops and binderies.

Specifications

Maximum temperature . . . 400° F.
Air Volume, per minute . . . 8 cu. ft.
Net weight . . . 5 lbs.; Shipping weight . . . 11 lbs.
Overall length—(not including attachments) . . . 14⅞"
Standard equipment—3-conductor cable with plug (3rd wire for grounding); 1000-watt heating element; six attachments as listed below.
Standard voltage—110; also available for 220 or 250 volts.
Price, complete with all attachments, for all voltages
(Code No. 63) **$33.50**
Heat Gun only, without attachments $26.50

Attachments

14970	Wide Nozzle, for radiators and large surfaces	$1.25
14969	Long Goose-Neck, for differentials	1.75
14968	Short Goose-Neck, for transmissions, etc.	1.60
14945	Goose-Neck Disc., to prevent oil drippage	.50
14967	Flexible Hose, to reach inaccessible places—other accessories also attach to end of hose	3.00
14971	Chain and Hook—to suspend unit in working position	.40

Portable Lectro-Shear

18-Gauge and 16-Gauge Sizes

THE Lectro-Shear is a brand new unit in the Black & Decker Line, with many features of advanced engineering design and performance that will quickly popularize it with all sheet metal fabricators.

Construction—The shearing action in Lectro-Shear is accomplished by the rapid reciprocating action of a vertical blade against a stationary horizontal blade, set in a special shoe which indicates the correct cutting angle and adapts the tool to all types of cutting work.

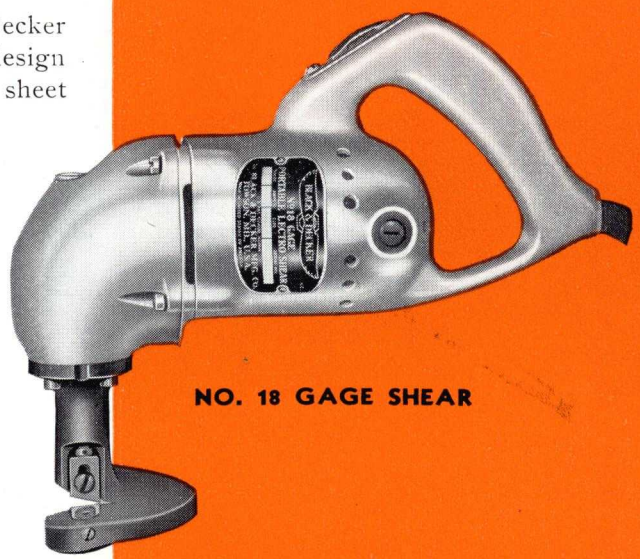
The unit is full ball bearing equipped (except the eccentric, which is steel on phosphor-bronze), and powered with a universal motor, operating on either alternating or direct current.

Smooth, streamlined aluminum housings eliminate all obstructions and unnecessary weight and make the Lectro-Shear most compact and easy to use.

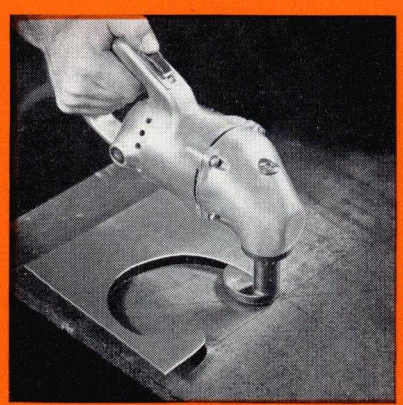
Simplicity of construction reduces service replacements to a minimum and increases the life of the tool.

It is not necessary to adjust blades for varying gauges or types of metal. Blades can be re-ground without the necessity of special fixtures.

Versatility—The Lectro-Shear will cut all types of sheet metal quickly, easily and accurately. It will cut on a radius as small as ¾", and easily follows a straight or curved, irregular line. It will cut up to its rated capacity in steel, galvanized iron; approximately one gauge thinner in monel metal and stainless steel; and at least 50% greater than rated capacity in copper, tin, aluminum, lead and other non-ferrous metals.



NO. 18 GAGE SHEAR



Specifications

Minimum Cutting Radius . . . ¾"
Cutting Speed (Strokes per minute):
No-load Speed . . . 2500; Full-load Speed . . . 1500

No. 18 Gauge Lectro-Shear

Capacity in Steel (U. S. Standard Gauge) . . . 18-gauge
Weight: Net . . . 6¾ lbs.; Shipping . . . 7¾ lbs.
Overall Length . . . 11"
Price, complete, for all voltages (Code No. 258) . . **$60.00**

No. 16 Gauge Lectro-Shear

Capacity in Steel (U. S. Standard Gauge) . . . 16-gauge
Weight: Net . . . 8 lbs.; Shipping . . . 9 lbs.
Overall Length . . . 11¾"
Price, complete, for all voltages (Code No. 259) . . **$76.00**

NO. 16 GAGE SHEAR

Standard Equipment—(Both Units)—3-wire cable and plug (3rd wire for grounding); thumb control switch; one set Lectro-Shear blades; universal motor, operating on A.C. or D.C.

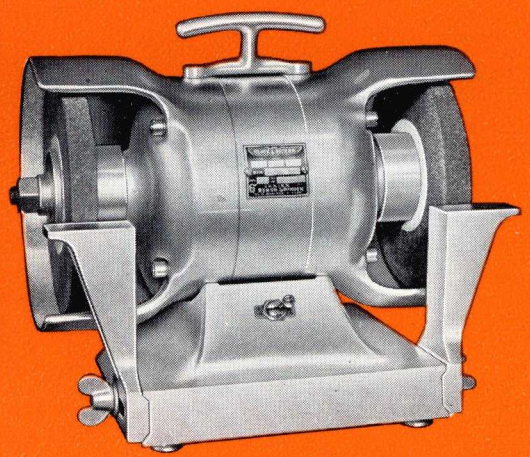
Standard Voltage—110; also available for 220 or 250 volts.

Attachments and Replacements

No. **19914** Vertical Shear Blade $1.00
No. **19916** Stationary Blade 1.00

BLACK & DECKER

6" Junior Ball Bearing Bench Grinder



6" JUNIOR

A sturdy, well-balanced Bench Grinder for practical shop use. Powered by a standard Black & Decker constant speed motor, of ¼-H.P. rating.

Carefully balanced rotor and wheel spindle mounted on full-size ball bearings; with special protective sleeves covering these bearings to keep out abrasive dust and dirt.

Wheel guards use new alloy which combines lightness with high tensile strength. Guards are cast integral with motor housings for greater clearance, and provide ample room for use of wire wheel brushes.

A toggle starting switch is conveniently mounted in the base.

Sturdy tool rests are firmly locked in base grooves with wing nuts, and easily adjusted to compensate for wheel wear.

Adapted to all types of light grinding and tool sharpening. Especially adapted to general shop use, where its price makes practical the use of several in convenient locations.

Specifications

Wheel size .....6" diam. x ⅝" face x ½" hole.

Motor—Not universal. Supplied for all standard A.C. single phase voltages and cycles only. Not available for Direct Current.

Code No.	*1-Phase Cycles*	*No-load Speed*
64	25	1500 R.P.M.
65	40	2400 R.P.M.
66	50	3000 R.P.M.
66	60	3600 R.P.M.

Motor Rating—¼ H.P. (except 25 cycle, ⅓ H.P.)

Weight; Net . . . 31½ lbs. Shipping . . . 34 lbs.

Overall Spindle Length . . . 12¼"; Overall height . . . 10"; Height to center-line of spindle . . . 5½"

Standard Equipment—3-conductor cable and plug (3rd wire for grounding); toggle switch in base; carrying handle, 4 rubber feet; 2 wheel guards; 2 tool rests; 2 grinding wheels, one medium, one fine.

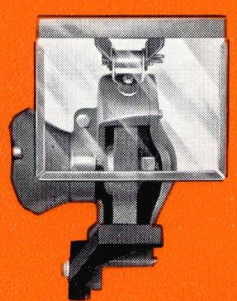
Price complete—for 110 volt, 50-60 cycle **$19.95**

For other 1-phase, A.C. voltages and cycles $21.95

Extra Equipment

No. 6405 ½" Threaded Chuck (R.H.) $7.00
No. 6664 Spindle Extension (R.H.) 4.00
No. 6665 Spindle Extension (L.H.) 4.00
No. 3564 Tapering Buffing Spindle (L.H.) 3.50
No. 3565 Tapered Buffing Spindle (R.H.) $3.50
No. 19115 Grinding Wheel Dresser .95
No. 18614 Metal Wheel Guard End Cover 1.00
No. 19983 Cutter Set for Dresser .. .15

See Page 41 for Grinding Wheels and Wire Wheel Brushes



EYE-SHIELD

6" Heavy Duty Ball Bearing Bench Grinder

6" HEAVY-DUTY

Extended wheel spindle and tapered end-housings increase the wheel clearance for for grinding large and odd-shaped pieces.

Enclosed wheel guards and adjustable tool rests combine maximum safety with maximum accessibility. End covers are removable for changing wheels. Guards are adjustable radially for grinding in any position.

Tool rests are adjusted for wheel wear.

Guards are drilled and tapped for mounting eye-shields, furnished at slight extra cost.

Grease-sealed ball bearings near ends of spindle insure smooth operation.

Specifications

Wheel Size ..... 6" diam. x ¾" face x ½" hole.

Motor—Not Universal. Supplied for 50-60 cycle single-phase A.C. 110 or 220 volt only; and all D.C.* voltages, up to and including 250 volts only.

Motor Rating . . . ½ H.P.

No-Load Speed—For D.C. and 60-cycle A.C. .....3600 R.P.M.
For 50-cycle A.C. .....3000 R.P.M.

Weight; Net . . . 45 lbs. Shipping . . . 50 lbs.

Overall Spindle Length . . . 15" Total Height . . . 11"

Height to C.L. Spindle . . . 6¼"

Standard Equipment—3-conductor cable and plug (3rd wire for grounding); toggle switch in base; carrying handle; rubber feet; two enclosed wheel guards with adjustable tool rests; two 6" grinding wheels, one medium and one fine.

Price, For 50-60 cycle, single-phase A.C. (Code No. 67) **$38.00**

For all available D.C. currents* (Code No. 68) $42.00

*** Grinder supplied for D.C. does not have enclosed guards, extended housings and is otherwise different in appearance.**

Extra Equipment

No. 6405 ½" Threaded Chuck (R.H.) .....$ 7.00
No. 6664 Spindle Extension (R.H.) 4.00
No. 6665 Spindle Extension (L.H.) 4.00
No. 3564 Tapered Buffing Spindle (L.H.) 3.50
No. 3565 Tapered Buffing Spindle (R.H.) 3.50
No. 17904 Shatter-proof Glass Eye Shield .....$ 1.75
No. 18463 Wide, enclosed wheel guard (R.H.) for 6" Wire Wheel Brush A.C. currents only 3.50
No. 86 Pedestal, with water pot 17.50
No. 19115 Grinding Wheel Dresser .95
No. 19983 Cutter Set for Dresser . .15

See Page 41 for Grinding Wheels and Wire Wheel Brushes

6" Combination Ball Bearing Grinder

Equipped with one standard wheel guard with tool rest, and one extra-wide guard, completely enclosed, to accommodate wire wheel brush; one 6" Grinding Wheel and one 6" Wire Wheel Brush. Other specifications same as above. Available only on A.C. Grinder.

Price—For 50-60 cycle, single-phase A.C. currents only **$41.00**

8 Inch Ball Bearing Bench Grinder

A full ½-H.P. motor, of the constant speed type, provides abundant power. Especially adapted to polishing, buffing and wire brushing operations.

Wheel guards comply with all safety regulations, being fully enclosed and equipped with tool rests and spark shields. Guards are drilled and tapped for eye shields; supplied at small extra cost.

Full-size ball bearings. Wire leads are brought out for permanent wiring, with housing drilled and tapped for conduit—and connector furnished for armored cable. Grounding is accomplished through conduit or armored cable cover.

Specifications

Wheel Size .....8" diam. x ⅞" face x ⅝" hole

Motor—Not Universal. Not available for direct current. Supplied in standard voltages and currents as follows:

Voltage	110, 220 or 250	440 or 550
Phase	1, 2 or 3*	2 or 3*
Cycle	25, 40, 50-60	25, 40, 50-60

* 3-phase, 110/220 volt and 220/440 volt units are reconnectable for either voltage. Single-phase and 2-phase units and 250 and 550 volt 3-phase units are for one voltage only.

Cycle	*1 Phase*	*2 Phase*	*3 Phase*	*No-load Speed*
25	Code 69	—	Code 70	1500 R.P.M.
40	Code 71	Code 72	Code 73	2400 R.P.M.
50 }	Code 74	Code 75	Code 76	{ 3000 R.P.M.
60 }				{ 3600 R.P.M.

Motor Rating .....½ H.P. (except for 25-cycle, which is ⅓ H.P.)

Net Weight . . . 72 lbs. Shipping Weight . . . 82 lbs.

Overall Spindle Length . . . 17¾"; Total Height . . . 12"; Height to C.L. Spindle . . . 7¼"

Standard Equipment—3-conductor cable and plug (3rd wire for grounding); except on 2 and 3 phase units lead wires for permanent connection with housing drilled and tapped for conduit and connector furnished for armored cable. Grounding accomplished through conduit or armored cable cover; toggle switch in base, except on 220/440 and 550 volt 3-phase units—no line switch supplied; carrying handle; rubber feet; two enclosed wheel guards with adjustable tool rests and spark shields; two 8" grinding wheels, one medium, one fine.

Price—For all available A.C. currents only.....**$68.00**

Extra Equipment

No. 18465 Wide Wheel Guard (R.H.) for Wire Brush $ 5.00

No. 17904 Shatter-proof Glass Eye Shield 1.75

No. 87 Pedestal, with water pot 22.00

No. 6666 Spindle Extension (R.H.) .....$ 5.50

No. 6667 Spindle Extension (L.H.) 5.50

No. 19115 Grinding Wheel Dresser .95

No. 19983 Cutter Set for Dresser .15

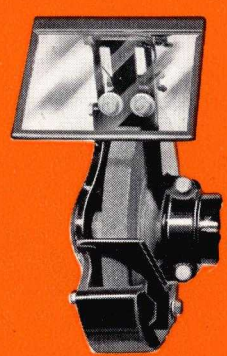
See Page 41 for Grinding Wheels and Wire Wheel Brushes.

8" Combination Ball Bearing Grinder

Equipped with one standard wheel guard, with tool rest and spark shield; and one extra-wide guard, completely enclosed, for wire wheel brush; one 8" Grinding Wheel and one 8" Wire Wheel Brush. Other specifications same as above.

Price—For all available A.C. currents only.....**$72.00**

8" BALL-BEARING



EYE-SHIELD

10 Inch Ball Bearing Bench Grinder

Full 1 H.P. constant-speed motor.

Strong, completely enclosed wheel guards, with exhaust outlets for connection to exhaust system. Tool rests and spark shields, mounted on guards.

Wire leads are brought out for permanent wiring, with housing drilled and tapped for conduit—and connector furnished for armored cable. Grounding is accomplished through conduit or armored cable cover.

Specifications

Wheel Size—10" diam. x 1" face x ¾" hole. Motor—Not universal. Supplied in standard voltages and currents as follows:

Voltage	110, 220 or 250	110 or 220	440 or 550
Phase	1, 2 or 3*	D.C.	2 or 3*
Cycle	25, 40, 50-60		25, 40, 50-60

* 3-phase, 110/220 volt and 220/440 volt units are reconnectable for either voltage. All D.C. units, 1-phase and 2-phase units and 250 and 550 volt 3-phase units are for one voltage only.

Cycle	*1 Phase*	*2 Phase*	*3 Phase*	*No-load Speed*
25	Code 78	—	Code 79	1500 R.P.M.
40	Code 80	Code 81	Code 82	2400 R.P.M.
50 }	Code 83	Code 84	Code 85	{ 1500 R.P.M.
60 }				{ 1800 R.P.M.
D.C.	—	(Code 77)	—	2000 R.P.M.

Motor Rating—1 H.P. (except 25 cycle, ¾" H.P.)

Weight; Net . . . 137 lbs. Shipping . . . 168 lbs.

Overall Spindle Length . . . 22¾"; Total Height . . . 15¼"

Height to Spindle (Bench Grinder) . . . 9½"

Standard Equipment—Lead wires for permanent connections, toggle switch in base; starting switch on 1-phase unit; 2 enclosed guards with exhaust outlets, tool rests and spark shields; two 10" wheels, one medium, one coarse.

Price—For all available voltages and cycles.**$98.00**

Attachments and Replacements

No. 18123 Shatter-proof Glass Eye shield .....$ 2.50

No. 18467 Wide Wheel Guard for Wire Brush (R.H.) .. 7.00

No. 12297C Spindle Extension—(R.H.) .....$ 8.00

No. 88 Pedestal with water pot 28.00

No. 19115 Grinding Wheel Dresser....95

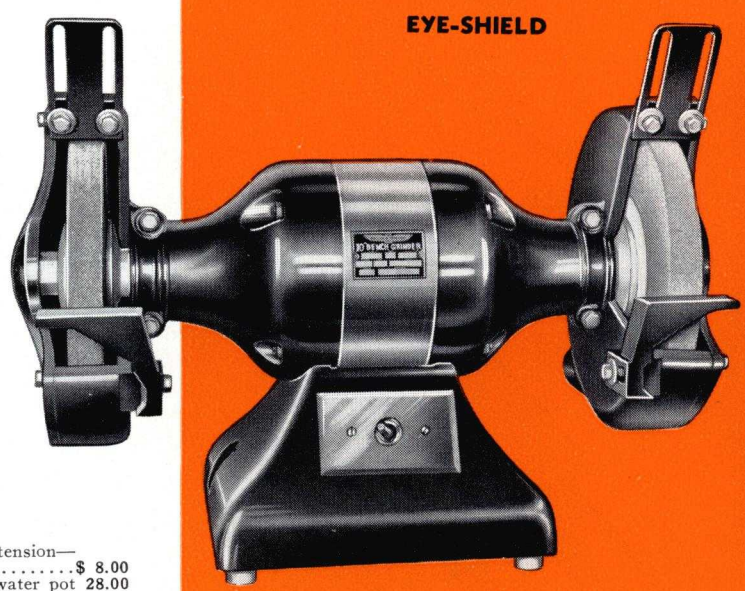
No. 19983 Cutter Set for Dresser .15

10-Inch Combination Bench Grinder

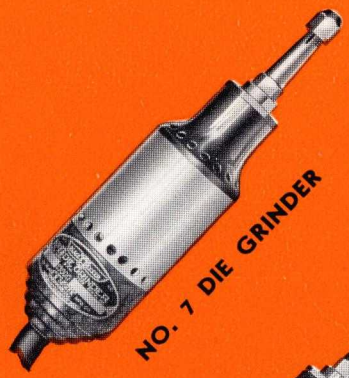
Equipped with one 10" Grinding Wheel, standard guard, tool rest and spark shield, as above; one 10" Wire Wheel Brush, extra-wide enclosed guard, without tool rest or spark shield. Other specifications as above.

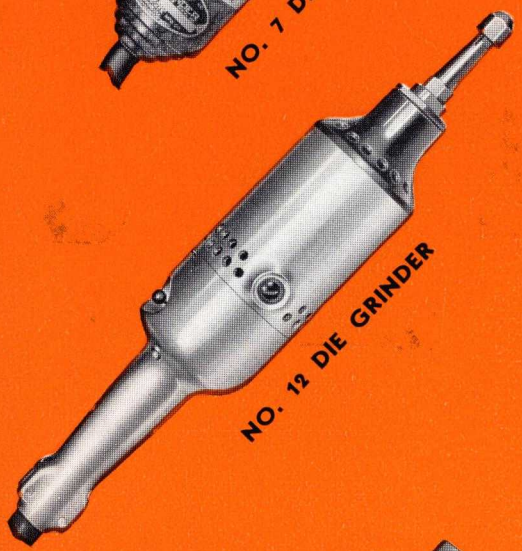
Price—For all available voltages and cycles.....**$103.00**

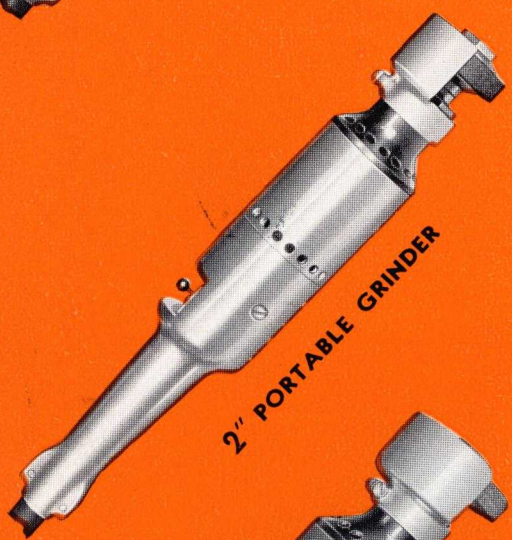
See Page 41 for Grinding Wheels and Wire Wheel Brushes.

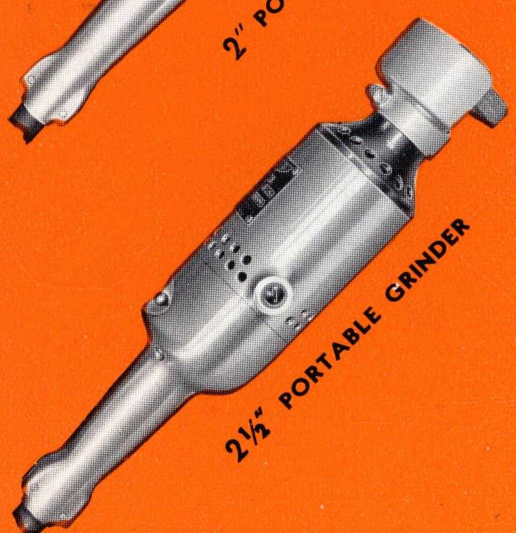


10" BALL-BEARING









BLACK & DECKER

Die Grinders

A GROUP of carefully designed, precision built Die Grinders is offered for use in die shops, stamping plants, tool rooms, metal working plants and other factories requiring an extremely compact, powerful, well-built hand grinder. Equipped with ¼" single-purpose chucks, adaptable to a wide variety of shaped wheels and burrs. Available with either bonnet cap or extended end handle. High speed direct drive from universal motors, operating on A.C. or D.C. No ginding wheels are supplied with Die Grinders.

Specifications

No. 7 Die Grinder

Maximum wheel size . . . 2"x½"x½"
No-load speed . . . 19,000 R.P.M.; Full load speed . . . 12,000 R.P.M.
Weight: Net . . . 2½ lbs.; Shipping . . . 3½ lbs.
Overall length . . . 9"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); ¼" Single purpose chuck and 2 double end wrenches (9/16" and 11/16"); bakelite end cap and switch in line.
Standard Voltage—110; also available for 220 or 250 volts.
Price, with end cap (Code No. **288**) **$35.00**
With extended end handle (Code No. **289**) $38.00

No. 12 Die Grinder

Maximum wheel size . . . 2½"x½"x½"
No-load speed . . . 19,000 R.P.M.; Full load speed . . . 12,000 R.P.M.
Weight: Net . . . 4 lbs.; Shipping . . . 5½ lbs.
Overall length . . . 14½"
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); ¼" Single purpose chuck and 2 double end wrenches (9/16" and 11/16"); extended end handle with switch.
Standard Voltage—110; also available for 220 or 250 volts.

Price, with extended end handle (Code No. **290**) **$40.00**
With bonnet end cap (Code No. **291**) $43.00

See attachments and accessories listed below.

Portable Grinders

2 and 2½ Inch

THESE two new units add to the completness of the Portable Grinder line. They are real precision grinding tools, light in weight, versatile in application. For all grinding where a compact tool with a small size wheel is required.

Specifications

2" Portable Grinder

Wheel size . . . 2"x½"x½"
No-load speed . . . 19,000 R.P.M.; Full load speed . . . 12,000 R.P.M.
Weight: Net . . . 3½ lbs.; Shipping . . . . 5 lbs.
Overall length . . . 13½"
Price, with extended end handle (Code No. **292**) **$40.00**
With end cap and switch in line (Code No. **293**) $43.00

2½" Portable Grinder

Wheel size . . . 2½"x½"x½"
No-load speed . . . 19,000 R.P.M.; Full load speed . . . 12,000 R.P.M.
Weight: Net . . . 4½ lbs.; Shipping . . . 6 lbs.
Overall length . . . 13¼"
Price, with extended end handle (Code No. **294**) **$45.00**
With bonnet cap and switch (Code No. **295**) $48.00
Standard Equipment—(Both Units) 3-conductor cable and plug (3rd wire for grounding); extended end grip switch handle; wheel guard; one high speed grinding wheel and two double end wrenches (9/16" and 11/16").
Standard Voltage—110; also available for 220 or 250 volts.
Universal Motor Operates on A.C. or D.C.

Attachments and Accessories

No. **20302** 5½" Extension spindle . . $3.50
No. **20285** Double end wrench (9/16" and 11/16" openings) 20
No. **20351** Wheel Arbor 1.50
No. **20350** ¼" Single purpose chuck 2.50
No. **20352** ⅛" Single purpose chuck 2.50
No. **20354** 2½" Wheel Guard $1.75
No. **20329** 2½" Grinding Wheel, Grade 36-5-98E 1.35
No. **20353** 2" Wheel Guard 1.75
No. **20330** 2" Grinding Wheel Grade 36-5-98E 1.20

Portable Electric Grinders

4 Inch, 5 Inch, 6 Inch and 8 Inch

A COMPLETE line of Grinders with increased power, using the most advanced features of Portable Grinder construction.

Full size ball bearings, set at extreme ends of wheel spindle, absorb all side thrust and insure long life. Armature shaft also mounted on ball bearings.

Completely enclosed commutator and switch compartments protect these parts from abrasive dust.

Improved ventilating system forces air straight through ample slots, which prevent clogging and accumulation of dirt. Air is blown against the wheel, **not** in operator's face.

Shaped grips prevent tool turning in operator's hand. Horizontal switch handles on all models improve balance and handling. Adjustable wheel guards can be turned to any desired position.

Universal motors operate on alternating or direct current.

Applications—Grinding, wire brushing, buffing and polishing all types of metal surfaces, where the grinder must be taken to the work. Removing rust, scale, paint, etc., from ships, cars, tanks, bridges, etc. Touching up metal bodies, fenders, cabinets, and other surfaces before painting. Grinding, buffing and polishing large metal frames, windows, doors, partitions and panels. Grinding or cutting off rivets, bolts, pins, studs, etc. Smoothing welded surfaces.

4" Portable Grinder

Wheel size . . . 4"x¾"x½"
No-load speeds . . . 4500 R.P.M.
Weight: Net . . . 12½ lbs. Shipping . . . 18 lbs.
Overall length . . . 23"
Price, complete for all voltages (Code No. 59) **$62.00**

5" Portable Grinder

Wheel size . . . 5"x¾"½"
No-load speeds . . . 3800 R.P.M.
Weight: Net . . . 15½ lbs.; Shipping . . . 21 lbs.
Price, complete for all voltages (Code No. 60) **$80.00**

6" Portable Grinder

Wheel size . . . 6"x1"x⅝"
No-load speeds . . . 3300 R.P.M.
Weight: Net . . . 23½ lbs.; Shipping . . . 30 lbs.
Overall length . . . 25½"
Price, complete for all voltages (Code No. 61) . **$100.00**

Standard Equipment: For 4", 5" and 6" Grinders—3-conductor cable and plug; plunger switch; grip end handle; adjustable wheel guard and one grinding wheel.

8" Portable Grinder

Wheel size . . . 8"x1"x⅝"*
No-load speeds 4000 R.P.M.†
Weight: Net . . . 25½ lbs.; Shipping . . . 35 lbs.
Overall length . . . 26¾"
Price, complete for all voltages (Code No. 62) **$120.00**

Standard Equipment: For 8" Grinder—3-conductor cable and plug; dust-sealed plunger switch; grip end handle, suspension eye-bolt; adjustable sheet-metal guard.
* For use with special bonded wheels for high speed service only. No wheels supplied with 8" Grinder.

Optional Equipment—For 8" Grinder. Spade type switch handle in place of straight grip handle—no extra charge.
† Special Speeds—For 8" Grinder—5000 or 6000 R.P.M. **$3.50 extra**

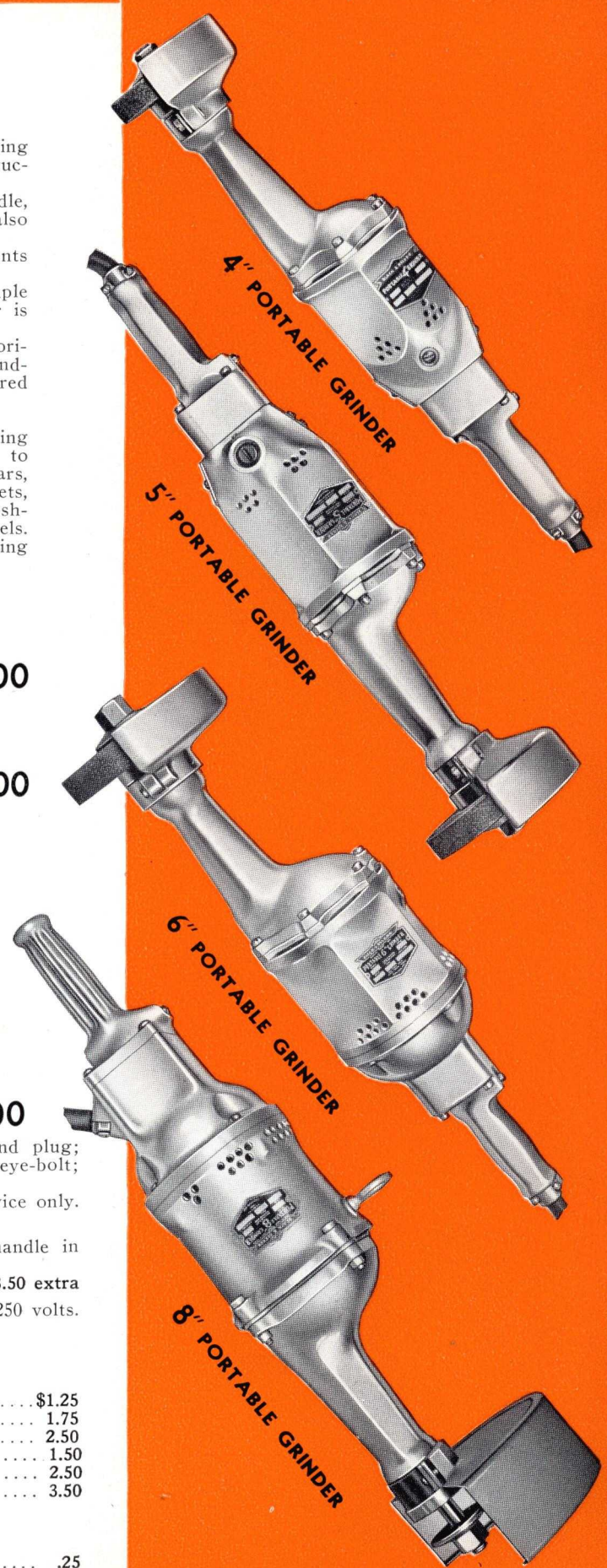
Standard voltage for all units—110; also available for 220 or 250 volts. Wheel rotation—Counter-clockwise, facing wheel-end.

Accessories

6772	4" x ¾" x ½" (Med. 36G) Wheel	$1.25
3042	5" x ¾" x ½" (Med. 36G) Wheel	1.75
3148	6" x 1" x ⅝" (Med. 36G) Wheel	2.50
704	4" Wire Wheel Brush	1.50
706	6" Wire Wheel Brush	2.50
708	8" Wire Wheel Brush	3.50

Attachments

No. **2473** Suspension Eye Bolt—for 5", 6" and 8" Grinder 25



GRINDING AND WIRE WHEELS

GRINDING WHEELS

WHEEL DRESSER

WIRE BRUSHES

ARBOR ADAPTORS

BLACK & DECKER

Grinding Wheels

Unit	Cat. No.	Price	Description			
			Dia.	Face	Hole	Grade
6″ Junior Bench Grinder	18124 18125	$1.75 1.75	6″ *	5/8″	1/2″	Fine 60K Med. 36G
6″ Bench Grinder (Special)	2950 2951	1.75 1.75	6″	1/2″	1/2″	Med. 36G Fine 60K
6″ Bench Grinder (Ball Bearing) (H)	15315 15314	2.00 2.00	6″	3/4″	1/2″	Med. 36G Fine 60K
6″ Bench Grinder (Ball Bearing) (G)	13950 5183	2.35 2.35	6″	3/4″†	1/2″	Med. 36G Fine 60K
7″ Bench Grinder (Type B)	14236 14235	3.00 3.00	7″	1″	5/8″	Med. 36G Fine 60K
7″ Bench Grinder (Type A	9063 9064	2.50 2.50	7″	3/4″	1/2″	Med. 36G Fine 60K
8″ Bench Grinder New Model (F)	18061 18062	5.00 5.00	8″	7/8″	5/8″	Med. 36K Fine 60M
8″ Bench Grinder Other Models	2403 2404	4.00 4.00	8″	3/4″	5/8″	Med. 40H Coarse 24G
10″ Bench Grinder	10275 10274	7.50 7.50	10″	1″	3/4″	Med. 40K Coarse 24H
2″ Portable Grinder & No. 7 Die Grinder	20330	1.20	2″	1/2″	1/2″	36-5-98E
2 1/2″ Portable Grinder & No. 12 Die Grinder	20329	1.35	2 1/2″	1/2″	1/2″	36-5-98E
4″ Portable Grinder	6772	1.25	4″	3/4″	1/2″	Med. 36G
5″ Portable Grinder	3042 2282	1.75 2.00	5″ 5″	3/4″ 1″	1/2″ 1/2″	Med. 36G Med. 36G
6″ Portable Grinder	3148	2.50	6″	1″	5/8″	Med. 36G
7″ H. D. Sander	10663	2.00	4″	3/4″**	1/2″	Med. 36H
7″ Super-Service and 9″ Sander	18039	8.50	6″	1″ Saucer	5/8″ 11 thr.	Coarse 20H
Valve Refacer Types A, B, & C	5773	2.50	6″	1/2″	3/4″	Med. 40K
Valve Refacer No. 90 and BU	7859	1.50	4″	1/2″	1/2″	Med. 40K
1/2″ Refacer (Types A to EF)	10495 7923 8605	1.25 1.25 1.25	3″ 3″ 3″	1/2″ 1/2″ 1/2″*	1/2″ 1/2″ 1/2″	Hard Valves Soft Valves 46J
5/8″ Refacer	11196 11197 14984	2.00 2.00 2.50	4″ 4″ 4″	1/2″ 1/2″ 1/2″†	3/4″ 3/4″ 3/4″	Hard Valves Soft Valves Flat Valves
Super-Service Refacer	VR-533 16371	2.75 2.50	4″ 4″	1/2″* 1/2″*	5/8″ 5/8″	Hard Valves Stellite Valves
Micrometer Attachment	19897 15295	2.75 3.50	4″ 4″	1/2″† 3/4″**	5/8″ 1/2″	90° Valves Valve Stems
1″ & 2″ Refacers	11305 11306	4.50	7″	3/4″	3/4″	Hard Valves Soft Valves
1/4″ Drill	306	.75	3″	1/2″	1/2″	40L

* Offset † Recessed ** Cup

Grinding Wheel Dresser

For truing and cleaning Bench Grinder Wheels. This dresser is of the cutter-type, the cutters being mounted in a cast iron handle which can be rested on the tool rest and passed back and forth across the face of the wheel. Supplied with one cutter set mounted in dresser and one spare set.

19115 Grinding Wheel Dresser (complete with spare cutter set) $0.95
19983 Replacement Cutter Sets for Grinding Wheel Dresser ..... .15

Wire Wheel Brushes

For Cleaning, Buffing and Polishing

FOR cleaning castings, moulds of all kinds, gears, dry and storage battery parts, welds, scale from forged and hardened parts, brass and copper before brazing or polishing, rust, paint from automobile bodies, stoves, etc., scales from fish, buffing tires and tubes, file marks from aluminum bodies, and many other purposes.

Size of Wire: All brushes are made of No. 30, W. & M. gauge wire. This is equivalent to .014″.

Price List and Specifications

Cat. No.	Diam.	Width	Price, complete, with 1 Set of Arbor Hole Bushings†
704	4″*	1 1/4″	**$1.50**
706	6″	1 1/2″	**2.50**
707	7″	1 1/2″	**3.25**
708	8″	1 1/2″	**3.50**
710	10″	2 ″	**6.00**
712	12″	2 ″	**8.00**

Extra Arbor Hole Bushings, per set of 2 ..... $.25

*1/2″ arbor hole is standard and will be furnished unless 3/8″ is specified.

†Arbor Hole Sizes and Bushing System

To enable fitting these brushes to various size arbors, and also to make it practical for your jobber to supply you promptly from stock a brush with any size hole, all brushes from 6″ to 12″, inclusive, are made with a standard size hole, for which a set of bushings will be supplied to fit your particular arbor. Bushings furnished for 3/8″, 1/2″, 5/8″, 3/4″, 7/8″, 1″, 1 1/8″, 1 1/4″, 1 3/8″, 1 1/2″, and 1 3/4″. The 4″ brush is furnished with 3/8″ and 1/2″ hole only.

Cup Wire Brushes for Sanders and Surfacer

No. **18056** 4″ Cup Wire Brush $4.00
No. **12398** 5″ Cup Wire Brush 4.50

7"-9" Two-Speed Electric Sander

To meet the needs of shops having a variety of sanding applications, none of which are frequent enough to require a separate Sander, we now offer the versatile Two-Speed Sander for use with both 7" and 9" abrasive discs.

The Two-Speed Sander is equipped with two sets of double gears, and a transmission gear which is shifted from one to the other by means of a gear-shift, set in the top of the gear housing. Thus the spindle is alternately operated at correct speed for 7-inch sanding (4200 R.P.M.) and 9-inch sanding (2700 R.P.M.)

The unit is supplied with both 7" and 9" moulded rubber pads, 9" abrasive discs and an adjustable disc cutter which cuts the discs to smaller diameters when outer surface is used up. If desired, 5" and 3" pads can be secured for this Sander, for complete use of discs.

A patented gear-locking pin in the gear housing, can be used to lock the spindle for easier change of pads and discs and for shifting gears.

Specifications

No-Load Speed—for 7" sanding discs . . . 4200 R.P.M.
for 9" sanding discs . . . 2700 R.P.M.
Spindle diam. . . . 5/8"—11 thr.
Weight: Net . . . 14¾ lbs.; Shipping . . . 25 lbs.
Overall Length (not including pad) . . . 19¾".
Standard Equipment—one 7" moulded rubber pad; one 9" moulded rubber pad; three 9" abrasive discs (1 coarse, 1 medium, 1 fine); one disc-cutter with plate; reversible side handle; gear locking pin; 3-wire cable and plug (3rd wire for grounding).
Standard Voltage—110; also available for 220 or 250 volts.

Price, complete for all voltages (Code No. **284**) **$78.00**
Universal motor operating on A.C. or D.C.

Replacements and Attachments

No. **17687**	7" Moulded Rubber Pad	**$3.00**
No. **18330**	9" Moulded Rubber Pad	**5.50**
No. **14237**	3" Flexible Pad, complete	**3.50**
No. **14238**	5" Flexible Pad, complete	**5.00**
No. **2473**	Threaded Eye Bolt	**.25**
No. **20445**	Disc Trimmer	**6.00**
No. **20196**	Replacement Blades (each)	**.50**
No. **20192**	Cutting Plate	**1.25**

Accessories

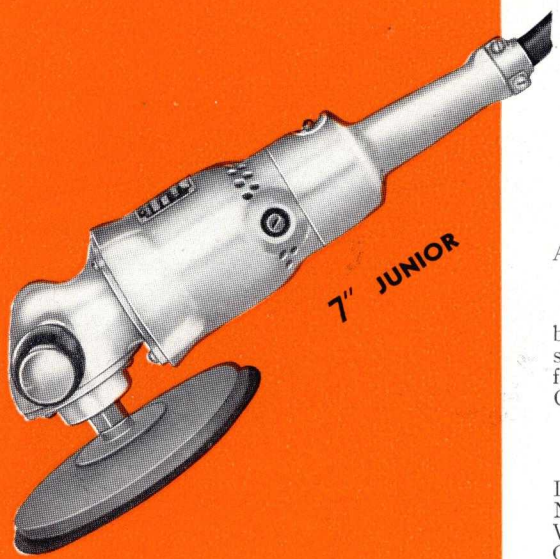
No. **10661**	7" Felt Rubbing Pad	**$1.50**
No. **10709**	9" Felt Rubbing Pad	**2.00**
No. **12398**	5" Cup Wire Brush	**4.50**
No. **18056**	4" Cup Wire Brush	**4.00**
No. **10663**	Cup Grinding Wheel	**2.00**

Complete Listing of Sanding Discs, Attachments and Accessories on Pages 49 and 50.

BLACK & DECKER

7-Inch Junior Sander

(Not for continuous production service)



A LIGHT WEIGHT unit for intermittent service in shops that do not require the speed, power or weight of a heavy-duty Sander. A compact tool, with improved power, reduced housing diameters and smooth surfaces, better balance and less weight than former model.

Improved Switch—A thumb-operated tumbler switch improves control and handling and increases safety.

Straight-Line Ventilation—through ample air-slots, prevents clogging and insures cool motor operation.

Moulded Rubber Pad adapts the Sander to flat or curved surfaces. Abrasive discs are held on Pad by a flange nut.

Universal Motor operates on either alternating or direct current.

The low cost of this unit recommends it for light sanding, touch-up body work, metal finishing, removing rust, smoothing welds, wood surfacing and similar light-duty operations. It is not recommended for continuous production service, nor for use with cup grinding wheels, Cup wire brushes or Rotary Planer Heads.

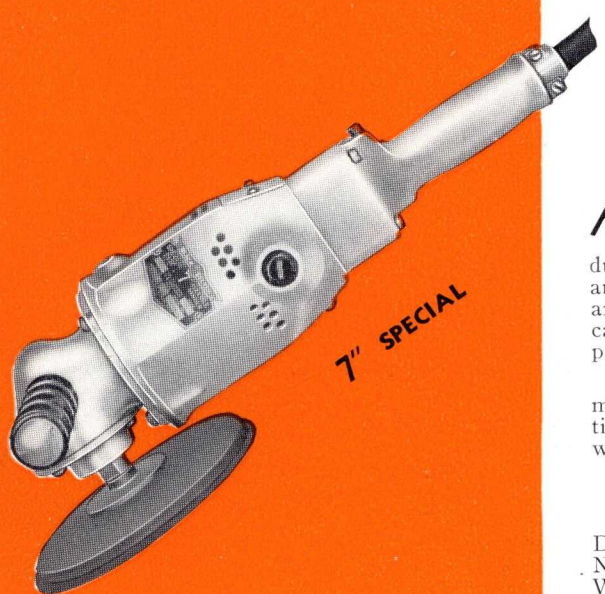
Specifications

Diam. of flexible Sanding Pad . . . 7″; Diam. of spindle . . . 5/8″—11 thr.
No-Load Speed . . . 3200 R.P.M.
Weight: Net . . . 7¾ lbs.; Shipping . . . 12 lbs.
Overall length (not including pad) . . . 14¾″.
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); detachable side handle; 7″ moulded rubber pad; three 7″ sanding discs (1 coarse, 1 medium, 1 fine).
Standard Voltage—110. Also available for 220 or 250 volts, no extra cost.
Price, complete for all voltages (Code No. **91**) **$39.50**

Replacement and Accessories

No. 17687 7″ Moulded Rubber Pad **$3.00**
No. 14237 3″ Flexible Pad complete **3.50**
No. 14551 3″ Replacement Pad **$1.15**
No. 14238 5″ Flexible Pad, complete **5.00**
No. 14553 5″ Replacement Pad **1.75**

Sanding Discs of Various Grades and Grits, see Page 49.



7-Inch Special Sander

A POPULAR Sander in the general purpose class, with extra power and the latest construction improvements. The commutator and switch are completely dust-sealed and protected against abrasive dust and dirt. A new plunger type of switch improves control of the unit and eliminates accidental starting. Non-clog ventilation through ample air-vents prevents overheated motor. Reversible side handle can be used for either right- or left-hand operation. Moulded rubber pad adapts unit to flat or curved surfaces.

Amply powered for general service in production and maintenance metal finishing, lacquer rubbing, rust and paint removing, stone and tile surfacing; scaling tanks, boat hulls, etc., with wire brush, smooth-welds and casting ridges with cup grinding wheel.

Specifications

Diam. of Flexible Sanding Pad . . . 7″; Spindle diam. . . . 5/8″—11 thr.
No-Load Speed . . . 4200 R.P.M.
Weight: Net . . . 12½ lbs.; Shipping . . . 18 lbs.
Overall length (not including pad) . . . 17¾″.
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); detachable side handle; 7″ moulded rubber pad; three 7″ sanding discs (1 coarse, 1 medium, 1 fine).
Standard Voltage—110. Also available for 220 or 250 volts, no extra cost.
Price, complete for all voltages (Code No. **92**) **$53.00**

Universal Motor, operates on A.C. or D.C.

Replacements & Attachments

No. 17687 7″ Moulded Rubber Pad. **$3.00**
No. 14237 3″ Flexible Pad, complete **3.50**
No. 14238 5″ Flexible Pad, complete **5.00**
No. 2473 Threaded Eye Bolt . . . . **.25**

Accessories

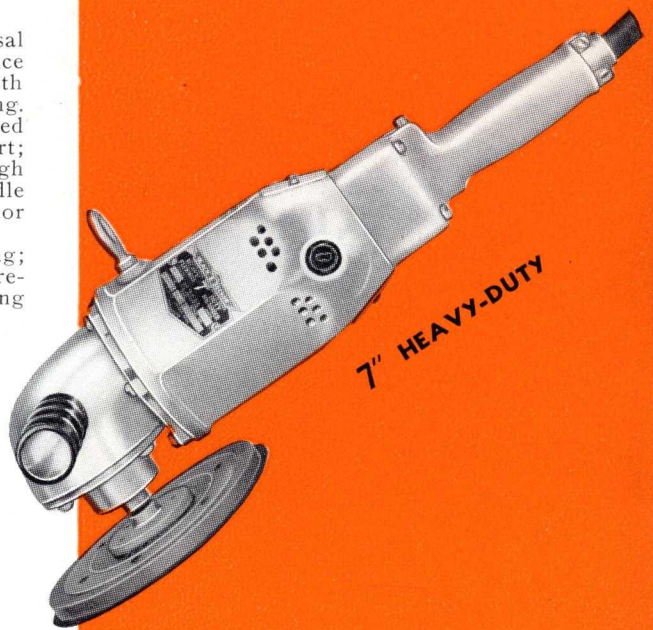
No. 10661 7″ Felt Rubbing Pad . . . **$1.50**
No. 12398 5″ Cup Wire Brush **4.50**
No. 18056 4″ Cup Wire Brush **4.00**
No. 10663 Cup Grinding Wheel . . . **2.00**

For Complete Listing of Other Replacements, Attachment and Accessory Items, see Pages 49 *and* 50.

7 Inch Heavy-Duty Sander

THIS unit is designed to meet the need for a very powerful universal motor Sander, capable of continuous high-speed production service under the most severe conditions. Built throughout for long life, with extra-sturdy gears in steel gear housing to withstand rough handling. Other important structural features include completely dust-sealed commutator and switch, protecting these vital parts from dust and dirt; plunger type for better control and safety; non-clog ventilation through large air-vents insuring cool motor operation; reversible side handle to suit right- or left-hand operator; flexible backing pad to fit flat or curved surfaces.

Specially recommended for high-speed production metal finishing; grinding metal, stone, or tile surfaces with cup or saucer wheels; removing scale, rust and paint with wire brush; shaping and surfacing heavy timbers and other wood surfaces with Planer Heads.



Specifications

Diam. Flexible Sanding Disc . . . 7"; Spindle Diam. . . . 5/8"—11 thr.
No-load speed . . . 4200 R.P.M.
Weight: Net . . . 15¼ lbs.; Shipping . . . 22 lbs.
Overall length (not including pad) . . . 18⅝".
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); detachable side handle; 7" flexible felt and metal pad; twelve 7" sanding discs (4 course, 4 medium, 4 fine).
Standard Voltage—110. Also available for 220 or 250 volts, no extra cost.

Price, complete for all voltages (Code No. **93**)..... **$75.00**

Universal Motor, operates on A.C. or D.C.

Replacements and Attachments

No. 10303	Complete 7" Flexible Pad	$6.00
No. 12684	Replacement 7" felt and metal assembly	1.75
No. 14237	3" Flexible Pad, complete	3.50
No. 14238	5" Flexible Pad, complete	5.00
No. 14743	Planer Head Set, complete	20.00
No. 17329	Sheet Metal Skirt Guard for Saucer Gr. Wheel..	5.00
No. 2473	Threaded Eye Bolt	.25

Accessories

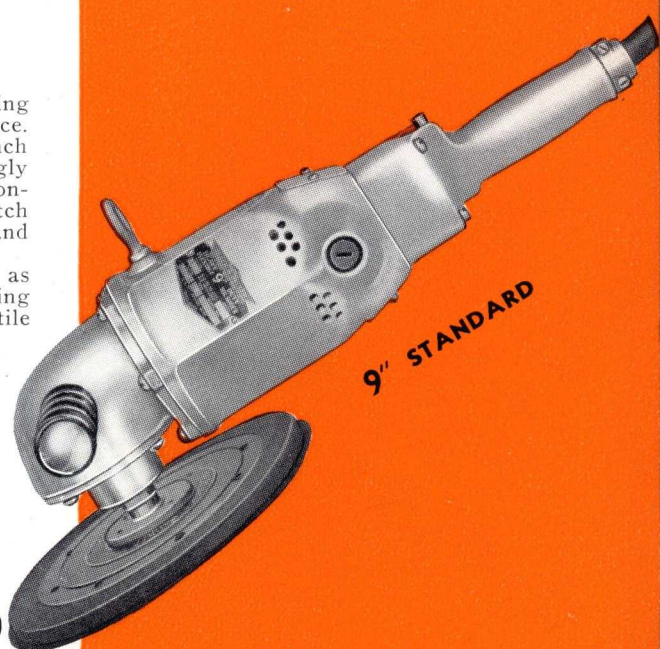
No. 10661	7" Felt Rubbing Pad ..	$1.50
No. 12398	5" Cup Wire Brush ...	4.50
No. 18056	4" Cup Wire Brush ..	4.00
No. 10663	4" Cup Grinding Wheel	2.00
No. 18039	6" Saucer Grinding Wheel	8.50

Complete listing of Attachments and Accessories on Pages 49 & 50

9 Inch Standard Sander

THIS Sander is built for the automotive or industrial user requiring a slower speed unit for larger working areas on intermittent service. Its structural features are the same as those found in the 7-inch Heavy-Duty Sander, but because of the larger pad and correspondingly greater load, it is not recommended for constant production use. It contains the important features, such as plunger, switch, dust-sealed switch and commutator, non-clog ventilation, reversible side handle and flexible felt and metal pad.

It is particularly adapted to cleaning large metal surfaces, such as tanks, ship hulls, etc., with wire cup brush; shaping and smoothing structural forms with coarse abrasive discs; cleaning stone and tile with saucer grinding wheel and other sanding and metal finishing operations requiring slow speed and large discs. Can also be used with Planer Heads on certain heavy-duty operations.



Specifications

Diam. Flexible Sanding Disc . . . 9"; Spindle Diam. . . . 5/8"—11 thr.
No-load speed . . . 2,700 R.P.M.
Weight: Net . . . 15¼ lbs.; Shipping . . . 22 lbs.
Overall length (not including pad) . . . 18⅝".
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); detachable side handle; 9" flexible felt and metal pad; twelve 9" sanding discs (4 coarse, 4 medium, 4 fine).
Standard Voltage—110. Also available for 220 or 250 volts, no extra cost.

Price, complete for all voltages (Code No. **94**) **$78.00**

Universal Motor, operates on A.C. or D.C.

Replacements and Attachments

No. 10700	Complete 9" Flexible Pad	$7.00
No. 12685	Replacement 9" felt and metal assembly	2.75
No. 14237	3" Flexible Pad, complete	3.50
No. 14238	5" Flexible Pad, complete	5.00
No. 14743	Planer Head Set, complete	20.00
No. 17329	Sheet Metal Skirt Guard for Saucer Gr. Wheel .	5.00
No. 2473	Threaded Eye Bolt	.25

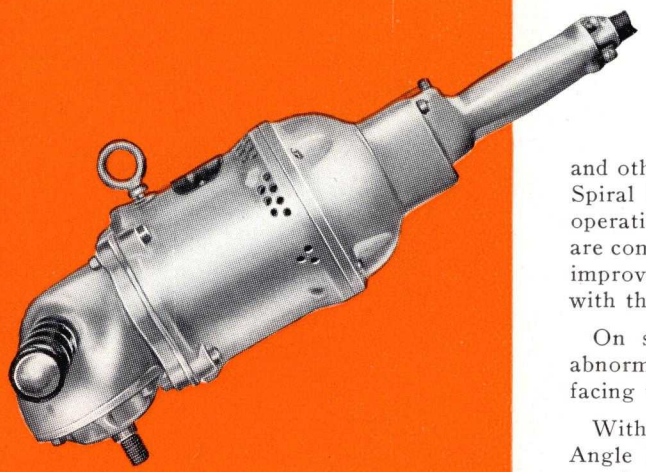
Accessories

No. 10709	9" Felt Rubbing Pad ..	$2.00
No. 12398	5" Cup Wire Brush ..	4.50
No. 18056	4" Cup Wire Brush ..	4.00
No. 10663	4" Cup Grinding Wheel	2.00
No. 18039	6" Saucer Grinding Wheel	8.50

Complete listing of Attachments and Accesories on Pages 49 & 50

BLACK & DECKER

Portable Electric Surfacer



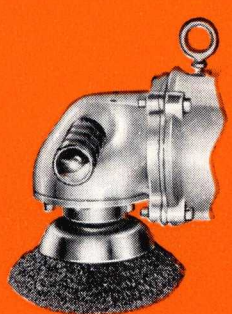
IN response to demands for an extra heavy-duty power unit to handle a variety of surfacing operations, we have developed the Portable Electric Surfacer. The motor is designed to handle the most severe sanding, grinding, planing, gouging or rubbing operations; all gears, housings, bearings and other parts are built to withstand heavy loads and rough handling. Spiral bevel gears with approved mountings provide quiet, powerful operation and long life. The switch and commutator compartments are completely sealed from dirt and abrasive dust. Plunger type switch improves control and safety. Field and gear housings are assembled with through bolts for greater strength and to facilitate inspection.

On sanding operations, the Electric Surfacer can be used with abnormal pressure to speed up work or to handle unusually hard surfacing work. Provision is made for a pressure pad, if desired.

With 6″ Saucer Grinding Wheel, this unit makes an ideal Right Angle Portable Grinder, for grinding welds and castings, for other metal grinding and for surfacing tile, stone, marble and concrete—where a smoother finish and faster work is desired.

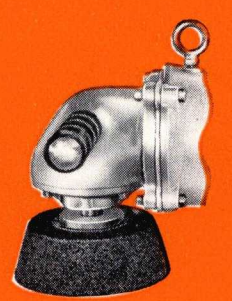
When equipped with Planer Heads, the Surfacer provides the most powerful Rotary Planer for gouging, shaping and surfacing timbers and beams, frames, piers, decks, hulls, floors and other wood surfaces.

Because of the wide variety of applications for this unit, the Surfacer is listed as a power unit only, without attachments, enabling the user to purchase whatever accessories are needed for his particular job. Thus by adding proper attachments, the Surfacer can be used as a Sander, a Right Angle Grinder or a Planer. Or it may be purchased complete as any of these units, as shown below.



Specifications

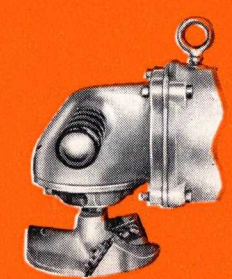
Spindle diameter and thread . . . ⅝″—11 thr.
No-load speed—for 7″ Sander and Right Angle Grinder . . . 4,200 R.P.M.
For 9″ Sander and Planer . . . 3,500 R.P.M.
Weight: Net . . . 21¼ lbs.; Shipping . . . 28 lbs.
Overall length (not including attachments) . . . 20″.
Standard Equipment—3-conductor cable and plug (3rd wire for grounding); plunger switch; detachable side handle for use on either side of unit; eye-bolt. No pads or discs are supplied with Electric Surfacer.
Standard Voltage—110; also available for 220 or 250 volts. Universal motor operates on A.C. or D.C.
Price, Portable Electric Surfacer, without attachments (Code No. **95**) **$105.00**



When ordering Surfacer, specify which of the following attachment groups are wanted with it.

No. **18039**	No. **18091**	No. **18093**	No. **14743**
6″ Saucer Grinding Wheel with threaded bushing. **$8.50.**	7″ Flexible Felt Sanding Pad with assortment of twelve 7″ abrasive discs. **$8.50.**	9″ Flexible Felt Sanding Pad with assortment of twelve 9″ abrasive discs. **$10.50.**	Set of two Planer Heads, (one gouging, one surfacing) with blades, in oak box. **$20.00.**

NOTE—The Electric Surfacer is packed and sold without attachments. Be sure to specify which of the above sets of attachments you want with the Surfacer, and add the price of these to the Surfacer price. Also specify the speed desired, whether 4,200 or 3,500 R.P.M.



Replacements and Attachments

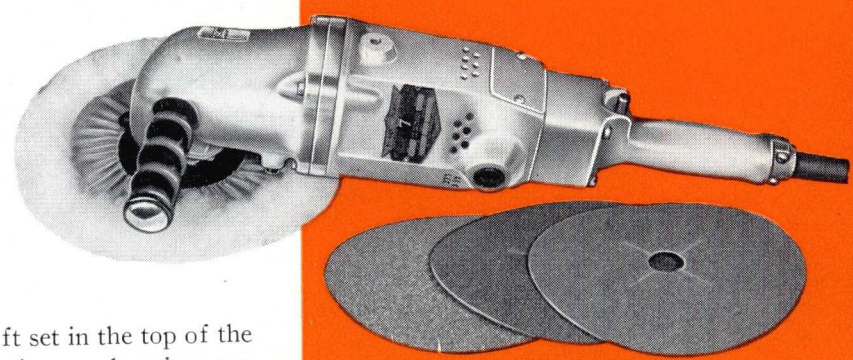
No. **10303** 7″ Flexible Felt and Metal Pad..... $ 6.00
No. **10700** 9″ Flexible Felt and Metal Pad..... 7.00
No. **17328** Metal Skirt Guard for Grinding Wheel..... 5.00
No. **14743** Set of two 5″ Planer Heads, complete..... 20.00

Accessories

No. **18039** 6″ Saucer Grinding Wheel..... $8.50
No. **10663** 4″ Cup Grinding Wheel..... 2.00
No. **12398** 5″ Wire Cup Brush..... 4.50
No. **18056** 4″ Wire Cup Brush..... 4.00

Seven-Inch Combination Sander-Polisher

THIS Combination Sander-Polisher is especially designed for the general shop having intermittent need for a Sander and for a Polisher, but which uses neither on constant production service. In addition to handling all general metal-surfacing operations with 7″ discs at correct speed (4200 R.P.M.), it can also be used for polishing, rubbing and other operations requiring a slower speed (1300 R.P.M.). The change in gear ratio for lower speed also increases the torque, which is highly valuable in rubbing down lacquer and paint work.



The Combination Sander-Polisher is equipped with two sets of double gears and a transmission gear which is shifted from one to the other, by means of a gear-shift set in the top of the gear housing. A patented gear-locking pin in the gear housing, can be used to lock the spindle for change of pads and discs and for gear shifting.

The unit is supplied with a 7″ moulded rubber pad, three 7″ abrasive discs of various grades, and a lambswool polishing bonnet which fits over the pad.

Specifications

No-load Speed—for 7″ sanding discs . . . 4200 R.P.M.
for polishing bonnet .....1300 R.P.M.
Spindle diameter and thread . . . 5/8″—11 thr.
Weight: Net . . . 14¾″ lbs.; Shipping . . . 21 lbs.
Overall Length (not including pad) . . . 19¾″
Standard Equipment—one 7″ moulded rubber pad; three 7″ abrasive discs (1 coarse, 1 medium, 1 fine); one 7″ lambswool bonnet; reversible side handle; gear locking pin; 3-wire cable and plug (3rd wire for grounding).
Standard Voltage—110; also available for 220 or 250 volts.

Price, complete for all voltages (Code No. **283**) **$67.00**
Universal motor operating on A.C. or D.C.

Replacements and Attachments

No. **17687** 7″ Moulded Rubber Pad	**$3.00**
No. **14237** 3″ Flexible Pad, complete	**3.50**
No. **14238** 5″ Flexible Pad, complete	**5.00**
No. **2473** Threaded Eye Bolt	**.25**

Accessories

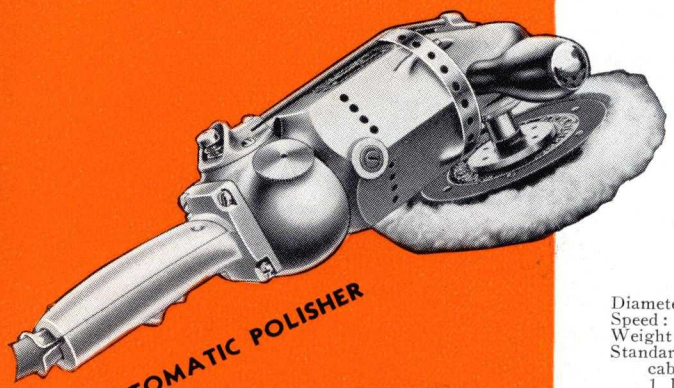
No. **10661** 7″ Felt Rubbing Pad	**$1.50**
No. **13086** Lambswool Polishing Pad (Box of 6)	**7.50**
No. **13087** Lambswool Polishing Bonnet, each	**2.00**

For Complete Listing of Attachments and Accessories

See Pages 49 *and* 50

BLACK & DECKER

7-Inch Automatic Polisher



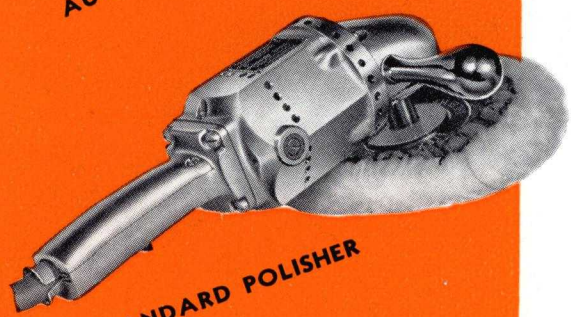
AUTOMATIC POLISHER

ELIMINATES hand labor on car polishing and rubbing. Quickly removes road film and restores new-car lustre. Materially reduces operating time by automatically applying polish to the car surface. Polish reservoir at rear end of Polisher, with plunger pump and tube, feeding polish through hollow spindle and center of pad directly to car surface. Produces more uniform finish, as polish is worked wet and does not dry on surface. With Black & Decker Lectro-Machine Polish, cleaning and polishing are done in one swift, profitable operation.

Specifications

Diameter of Pad . . . 7″; Spindle diameter . . . ⅝″; 11 thread.
Speed: No-load . . . 1600 R.P.M.; Full-load . . . 1200 R.P.M.
Weight: Net . . . 9 lbs.; Shipping . . . 19 lbs.
Standard Equipment—Polisher with reservoir, plunger pump and feed tube; 3-wire cable and plug (3rd wire for grounding); 7″ flexible pad; 1 lambswool bonnet; 1 lambswool pad; detachable side handle.
Standard Voltage—110; also available for 32, 220 or 250 volts.
Price, complete Automatic Polisher (Code No. **97**) **$65.00**

7-Inch Standard Polisher



STANDARD POLISHER

AN ideal Polisher for shops having only a small volume of polishing. Eliminates hand rubbing and has all advantages of Automatic Polisher except speed of operation. Is not equipped with reservoir or feed mechanism and polish must be applied by hand.

Especially adapted to rubbing down new paint and lacquer; for polishing and cleaning all metal surfaces; for waxing and polishing metal and wood furniture, panels, boats, etc.

Specifications

Diameter of Pad . . . 7″; Spindle diameter . . . ⅝″; 11 Thread.
Speed: No-load . . . 1600 R.P.M.; Full-load . . . 1200 R.P.M.
Weight: Net . . . 8½″ lbs.; Shipping . . . 17 lbs.
Standard Equipment—Polisher; 3-wire cable and plug (3rd wire for grounding); 7″ flexible pad; 1 lambswool bonnet; 1 lambswool pad; detachable side handle.
Standard Voltage—110; also available for 32, 220 or 250 volts.
Price, complete Standard Polisher (Code No. **96**) **$52.00**

Vackar Portable Electric Vacuum Cleaner

VACKAR

A SUPER-POWERED portable vacuum cleaner for rapid, efficient cleaning of automobiles, in wash-racks, lubricating stations and super-service stations.

The unit is completely self-contained; nothing but the long suction hose is handled by the operator or taken inside the car. Handy cleaning attachments thoroughly clean all types of upholstery, floor carpets and mats, pulling out embedded dirt and grit. Dirt-laden air enters at bottom of large metal container, dirt stops at filter and drops to dirt compartment at bottom; filtered air passes through motor and fan and out at top. The metal container holds more dirt and is easy to empty; no messy dirt bag.

Rugged construction fits the Vackar for rough usage in garages and service stations. Steel feet in heavy base slide easily and permit operator to pull unit over any floor; it "tows by the hose." Swivel hose connection prevents hose kinking. Handy brackets are provided for coiling hose and electric cable when not in use.

Specifications

Dimensions: Height 17 inches; Diameter of Top, 12½ inches; Diameter of Body, 10 inches; Diameter of Base, 16 inches.

Mechanism: Universal Motor operates on A.C. or D.C. Three-stage centrifugal fan moves 42 cubic feet of air through hose per minute. Baffle plates prevent air slippage. Sealed Vacuum pull, 40 inches. Vacuum, with 1″ orifice, 10″.

Equipment: 10-foot Vacuum Hose. The hose is made of smooth rubber, so it can be easily and quickly cleaned with a gasoline dampened cloth. Swiveled hose connection permits it to turn easily and prevents kinking.

20-foot Rubber Covered 3-conductor cable, with plug and ground connection.

Wide mouthed Upholstery Nozzle, with detachable brush, for cleaning seats, sides, top, floor mats, etc.

Flat Tube Nozzle, for reaching hard-to-get-at dirt in crevices around seats, in tufts and folds of upholstery, around edges of floor mats, etc.

Finish: Black enamel top and base; aluminum tub, trimmed with polished chromium.

Weight: Net . . . 32 lbs.; Shipping . . . 40 lbs.
Standard Voltage—110; also available for 32*, 220 or 250 volts.
Price, Vackar complete with attachments (Code No. **98**) for all standard voltages except 32 volt **$75.00**
*for 32 volt current **$78.00**

Attachments

No. **18182** Ball-bearing, swivel Caster, Set of 3 ..... **$3.75**
No. **18183** 10-foot Flexible Rubber Covered Hose **5.50**
No. **18184** Wide Mouth Upholstery Nozzle **$1.25**
No. **18185** Flat Tube Nozzle .... **.50**
No. **18186** 6″ Upholstery Brush .. **.85**

Lectro-Kleen Process

Cleans Cars Inside and Out— "Gets All the Dirt"

A REVOLUTIONARY, electrical car-cleaning process that eliminates all slow hand-labor; does a thorough cleaning and polishing job; and restores new-car beauty — inside and out—in four quick, simple operations.

1—The powerful VACKAR Vacuum Cleaner removes all dust, grit, lint and loose dirt from upholstery, cushions, mats, sides and top fabric. Three attachments for all types of fabric and all surfaces.

2—The sensational LECTRO-KLEENER solvent is odorless, non-inflammable, non-explosive and harmless to anything but spots and stains. Supplied in concentrated form, one gallon of LECTRO-KLEENER makes five gallons of cleaning mixture. A rotary bristle brush, attached to the Polisher is dipped in the mixture and scrubs all fabric completely free of grease, oil spots and stains and restores the life and lustre of the fabric. A small hand-brush is supplied for corners inaccessible to the rotary brush.

3—The VACKAR is used again to remove excess moisture from upholstery and raise the nap of the fabric. This speeds the drying and livens the fabric.

4—The POLISHER equipped with flexible pad and lambswool bonnet is used with LECTRO-MACHINE POLISH to remove all grime and road film from the outer surface. LECTRO-MACHINE POLISH does a cleaning and polishing job in one operation and quickly restores the lustre and beauty of new-car paint.

CAR DEALERS. Definitely increase the resale value of trade-ins and used cars; attract more business by "appearance reconditioning" with the LECTRO-KLEEN PROCESS, offering CLEAN upholstery and a glistening finish that knocks-out sales resistance.

SERVICE AND LUBRICATING STATIONS. Increase your profit on every customer by merchandising this quick, COMPLETE beauty-restoring service along with any order for mechanical work.

AUTO LAUNDRIES AND STORAGE GARAGES. Offer a real laundry service that cleans, scrubs and polishes.

Specifications

The complete LECTRO-KLEEN Process consists of the following 12 items—all that's needed for a cleaning method that "Gets ALL the Dirt."

1 VACKAR, complete with Universal Motor and
- 1 Wide Upholstery Nozzle
- 1 Upholstery Nozzle Brush
- 1 Flat Tube Nozzle

1 Standard POLISHER, with Universal Motor and
- 1 Lambswool Pad
- 1 Lambswool Bonnet

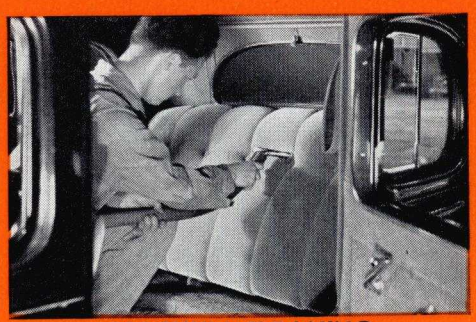
1 Rotary Lectro-Kleen Brush
1 Hand Brush for Spotting
1 Metal Mixing Pan
1 Gallon LECTRO-KLEENER
1 Gallon LECTRO MACHINE POLISH

Price, Complete as above (Code No. **232**) **$135.00**

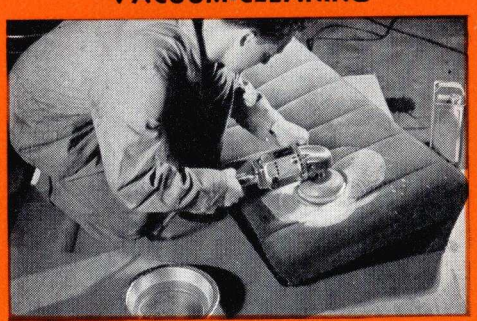
No.	**19214**	Rotary Lectro-Kleen Brush $2.00
No.	**19238**	Hand Brush for Spotting ..... .15
No.	**19239**	Metal Mixing Pan ..... .15
No.	**234**	LECTRO-KLEENER (1 gal. can) 3.50
No.	**481**	LECTRO-MACHINE POLISH (1 gal. can) 2.85

See Complete List of Accessories, Pages 49 and 50.

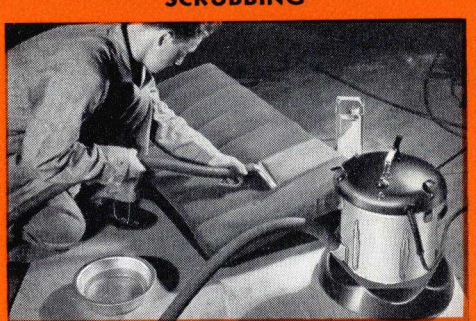
LECTRO-KLEEN PROCESS



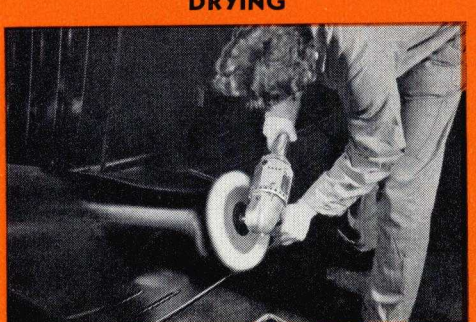
VACUUM-CLEANING



SCRUBBING

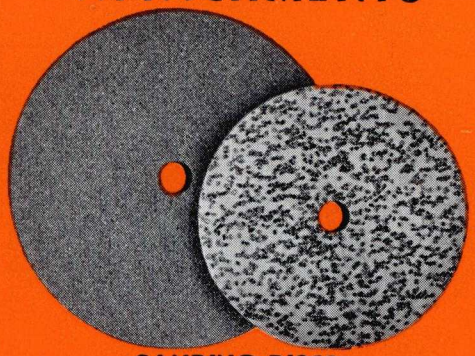


DRYING

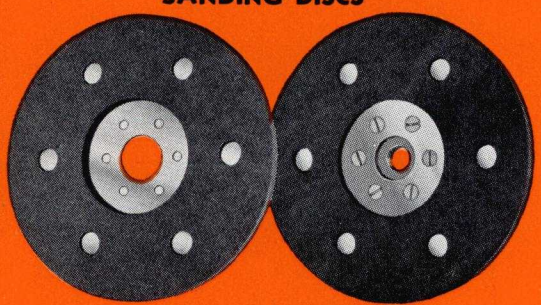


POLISHING

SANDER ATTACHMENTS

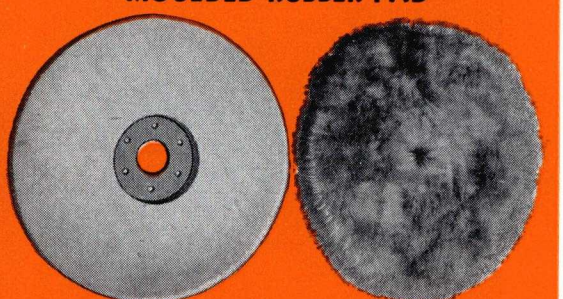


SANDING DISCS

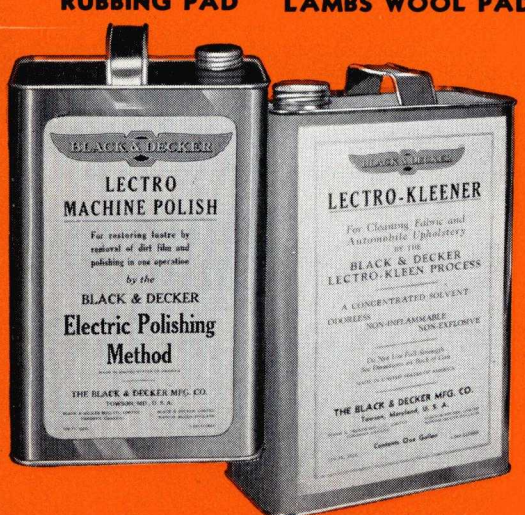


FELT AND METAL PADS

MOULDED RUBBER PAD



RUBBING PAD LAMBS WOOL PAD



BLACK & DECKER

Sander and Polisher Attachments and Accessories

Sanding Discs

SANDING and abrasive discs can be furnished in a variety of grades and grains. Discs designated as "Open Grain" are especially suited for wood sanding (Nos. 16, 24 and 36 for removing paint and varnish); "Closed Grain" discs are for metal work.

Grade	7-Inch Sanding Discs			9-Inch Sanding Discs		
Closed Grain	Cat. No.	List Price — Each	List Price Per 100	Cat. No.	List Price — Each	List Price Per 100
*16	17815	$0.27	$26.62	10618	$0.36	$35.48
24	9990	.21	20.68	10719	.28	27.56
30	18488	.21	20.47	18492	.28	27.31
36	9991	.21	20.25	10720	.27	26.96
50	9992	.19	18.92	12153	.26	25.20
60	18489	.18	17.97	18493	.24	23.99
80	10485	.17	16.94	10721	.23	22.58
100	12145	.17	16.94	12149	.23	22.58
120	12146	.17	16.94	12150	.23	22.58
150	12147	.17	16.94	12151	.23	22.58
180	12148	.17	16.94	12152	.23	22.58
Open Grain						
*16	15134	.27	26.62	15137	.36	.35.48
24	15135	.21	20.68	15138	.28	27.56
30	18490	.21	20.47	18494	.28	27.31
36	15136	.21	20.25	15139	.27	26.96
50	12011	.19	18.92	12131	.26	25.20
60	18491	.18	17.97	18495	.24	23.99
80	12012	.17	16.94	12132	.23	22.58
120	12013	.17	16.94	12133	.23	22.58

*No. 16 discs are packed 10 to a box; all other discs packed 25 to a box.

Replacement Sander Pads and Parts

All pads and replacement assemblies are interchangeable on all Sanders Surfacer and Polishers as the spindle diameter and thread is the same for all units of this group.

No. 10303 7″ Flexible felt and metal pad complete $6.00
No. 12684 Replacement felt and steel disc assembly for 7″ flexible pad 1.75
No. 10700 9″ Flexible felt and metal pad complete 7.00
No. 12685 Replacement felt and steel disc assembly for 9″ flexible pad 2.75
No. 17687 7″ Moulded Rubber Pad complete 3.00
No. 18329 7″ Heavy Duty Moulded Rubber Pad 4.00
No. 18330 9″ Moulded Rubber Pad 5.50
No. 14237 3″ Flexible Pad Complete 3.50
No. 14551 Replacement Pad for 3″ Flexible Pad 1.15
No. 14238 5″ Flexible Pad Complete 5.00
No. 14553 Replacement Pad for 5″ Flexible Pad 1.75
No. 18091 7″ Flexible Pad and assortment of 12 discs for Surfacer 8.50
No. 18093 9″ Flexible Pad and assortment of 12 discs for Surfacer..... 10.50

Lambswool Polishing Pad and Bonnet

For cleaning and polishing lacquered finishes and for obtaining final high lustre after spraying. Attached direct to flexible pad of Polisher.

No. 13086 Lambswool Polishing Pad for 7″ Polisher or 7″ Sander, box of six.. $7.50
No. 10710 Lambswool Polishing Pad for 9″ Sander, each..... 3.00
No. 13087 Lambswool Polishing Bonnet, each 2.00

Felt Rubbing Pad

For rubbing down orange peel in lacquer finishes, etc. Attaches direct to flexible pad of Polisher.

No. 10661 Felt Rubbing Pad for 7″ Polisher or 7″ Sander $1.50
No. 10709 Felt Rubbing Pad for 9″ Sander 2.00

Lectro-Machine Polish

Lectro-Machine Polish is a special cleaning and polishing compound, correct for use with the Black & Decker Electric Polisher. This compound cleans and polishes in one quick, easy operation.

Lectro-Machine Polish, price per gallon (Code No. 481) $2.85

Lectro-Kleener

Lectro-Kleener solvent is odorless, non-inflammable, non-explosive and harmless to anything but spots and stains. Supplied in concentrated form, one gallon of Lectro-Kleener makes five gallons of cleaning mixture. Applied to upholstery with rotary Lectro-Kleen brush attached to Standard Polisher.

Lectro-Kleener, 1 gallon can (Code No. 234) $3.50

No. 2 Body Wax

Electric Body Wax used with the Polisher produces a hard, brilliant, waxed finish in a short time. Ideal for use on new or newly-lacquered cars or to give an extra protective coating to cars cleaned with Lectro Machine Polish.

Body Wax, ½ gallon can (Code No. 483) $3.00

No. 10 Rubbing Compound

This Rubbing Compound applied with Polisher or Sander equipped with rubbing pad, will quickly remove "orange peel" and spray pits from newly lacquered surfaces, giving a smoother, more uniform surface.

No. 10 Rubbing Compound, price per gallon (Code No. 477)..... $4.00

Sander and Polisher Attachments and Accessories

Lectro-Kleen Accessories

The Rotary Bristle Brush has a 5/8"-11 thread bushing and threads on the Polisher spindle. Used with Lectro-Kleener mixture in metal mixing pan for scrubbing upholstery, floor mats, carpets and other fabrics. The hand bristle brush is for spotting and reaching corners. All are standard equipment with Lectro-Kleen Process.

No. **19214** Rotary Lectro-Kleen Brush $2.00
No. **19238** Hand Bristle Brush for spotting ..... .15
No. **19239** Metal Mixing Pan (2 qt. capacity) ..... .15

Sanding Disc Cutter

Adjustable disc cutter is designed for trimming sanding discs to smaller diameters as outer surface is used up. The base plate is of heavy sheet metal, providing a solid base for cutter blade to make a clean round circular cut. Cutter arm is marked for diameters of 9", 8", 7", 6" and 5". Removable blade is easily replaced at small cost. Complete Disc Cutter is standard equipment with 2-Speed Sander.

No. **20445** Disc Cutter, complete with Arm, Plate & Blade $6.00
No. **20192** Metal Base Plate 1.25
No. **20196** Replacement Cutter Blade ..... .50

Suspension Eye Bolt

A threaded eye-bolt for suspending the Surfacer and all Sanders except "Junior," which are drilled and tapped to take the eye-bolt. Standard equipment on Surfacer.

No. **2473** Suspension Eye-bolt ..... $.25

Saucer Grinding Wheel (Fig. B)

For some metal grinding applications, the Sander equipped with a Saucer Grinding Wheel does smoother and faster work than a Portable Grinder. Recommended only for the 7" Heavy-Duty Sander, and Electric Surfacer. Has 5/8"-11 thread bushing to fit spindle direct.

No. **18039** 6" Saucer Grinding Wheel $8.50
No. **17329** Skirt Wheel Guard for H. D. Sander (Fig. A) 5.00
No. **17328** Skirt Wheel Guard for Surfacer (Fig. A) 5.00

Cup Grinding Wheel (Fig. C)

For smoothing welds and other metal surfaces. Use No. 10711 Spindle Extension to attach to Sander.

No. **10663** 4" Cup Grinding Wheel Grade 36H $2.00

Spindle Extension (Fig. D)

For attaching Cup Grinding Wheel and Wire Wheel Brush to Sander. Threads on Sander spindle in place of flexible pad.

No. **10711** Spindle Extension $2.00

Wire Cup Brush (Fig. E)

Especially designed for cleaning castings, structural steel, tanks and sheet metal. 5/8"-11 thread bushing threads on Sander Spindle in place of flexible pad. For 7" Heavy-Duty, 9" Sanders, and Surfacer.

No. **12398** 5" Wire Cup Brush $4.50
No. **18056** 4" Wire Cup Brush 4.00

Rotary Planer Heads (Fig. F)

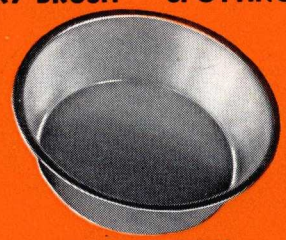
Perform many wood surfacing and shaping operations formerly done with jack-plane and adz. Two types of planer head are supplied; one with rounded surface for deep gouging, the other with flat face for surfacing and semi-finishing. These heads are interchangeable on the spindle of the 7" Heavy-Duty Sander and Electric Surfacer. For smoothing and fitting joints in concrete forms; surfacing boat hulls and decks, piers, floors, etc.; beveling and shaping beams and timbers, etc.

No. **14743** Set of two 5" Planer Heads, one Gouging and one Surfacing, complete with blades, packed in neat oak box... $20.00
No. **14734** 5" Gouging Planer Head, complete with blades, in box.. 11.00
No. **14735** 5" Surfacing Planer Head, complete with blades, in box 11.00
No. **14733** Replacement Blade, (same for either head) each 90c—Set of 3 ..... 2.25

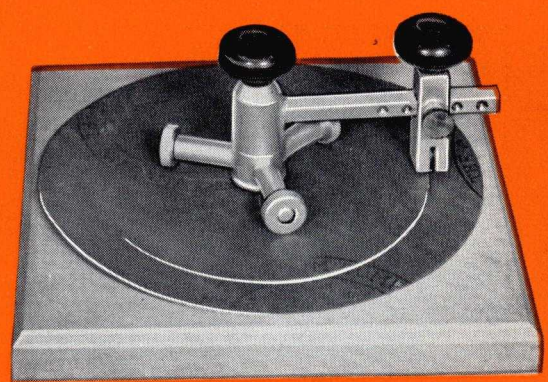
SANDER ACCESSORIES

ROTARY BRUSH

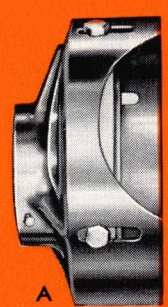
SPOTTING BRUSH



MIXING PAN

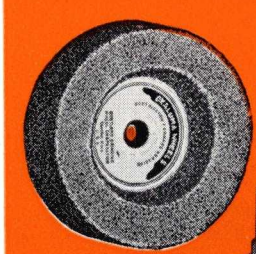


DISC CUTTER



A

B



C

D

E

F

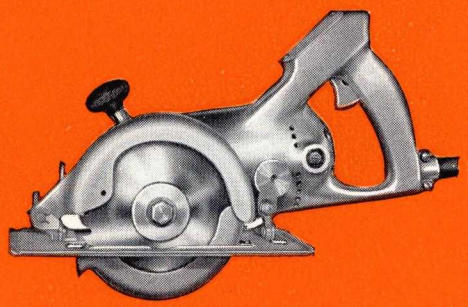
BLACK & DECKER

Portable Electric Saws

BLACK & DECKER'S new line of Portable Electric Saws offers many design and construction features such as complete safety, perfect balance, less weight, increased power, that will interest carpenters, builders, contractors, woodworking plants, shipping departments, freight handlers and other saw users.

Power is transmitted by efficient worm gears. Cool motor operation is assured with an efficient fan and ample vent slots. A new close-coupled design has materially reduced weight and length. "Saw grip" switch handle and correctly placed front handle make perfect balance and a minimum of operator fatigue.

Cutting depth can be adjusted at any point up to maximum. Table can be tilted for bevel cutting at any angle to 45°. A detachable, adjustable rip-fence guides rip-cutting up to 6". "Sight" notch makes it easy to follow pencil mark. Telescoping guard covers blade except when cutting. Inner guard opens as Saw enters cut, and springs closed as Saw emerges. Outer guard swivels to follow depth adjustment. 2-pole instant release switch inside the grip prevents accidents.



NO. 35 TRIM SAW

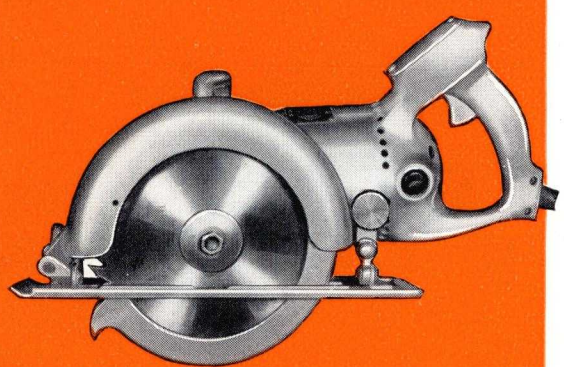
No. 35 Electric Trim Saw

A very light, handy power Saw specially designed for trim work and light crating. Ideal for builders and shipping departments.

Specifications

Diameter of saw blade . . . 5"; Diameter of spindle . . . 1⅛"
Maximum vertical depth of cut: On vertical cut...1⅜"; On 45° cut...1"
Speed: No-load . . . 4200 R.P.M.; Full load . . . 2800 R.P.M.
Weight: Net . . . 11¼ lbs.; Shipping . . . 22 lbs.
Overall length: 14"
Standard Equipment—3-wire cable and plug (3rd wire for grounding); 2-pole instant-release switch; adjustable saw table; detachable ripping fence; one 5" Combination Rip and Cross Cut Blade; one carrying case, ½ lb. can special lubricant for worm gear; T-handle wrench.

Price, complete for all voltages (Code No. **285**) **$75.00**



7" SAW

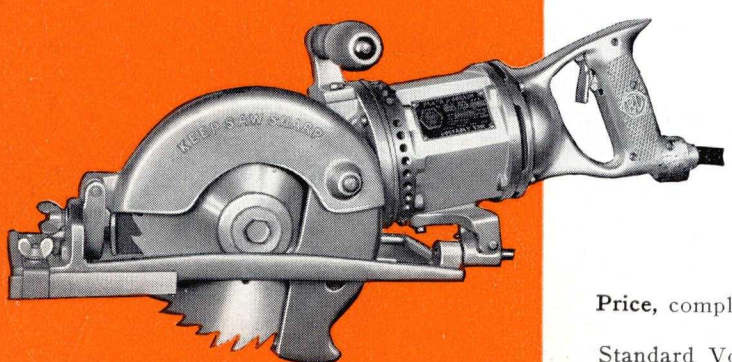
7" Portable Electric Saw

The most widely useful of all portable saws. 2⅜" maximum depth of cut will handle all popular lumber sizes.

Specifications

Diameter of Saw Blade . . . 7"; Diameter of Spindle . . . 1⅛"
Maximum vertical depth of cut: On vertical cut...2⅜"; On 45° cut...1¾"
Speed: No-load . . . 3,200 R.P.M.; Full load . . . 2,200 R.P.M.
Weight: Net . . . 17¾ lbs.; Shipping . . . 31¾ lbs.
Overall length: 17½"
Standard Equipment—2-pole instant-release switch; 3-wire cable and plug (3rd wire for grounding); adjustable saw table; detachable ripping fence; one 7" Combination Rip and Cross Cut Blade; one carrying case, ½ lb. can of special lubricant for worm gear, T-handle wrench.

Price, complete for all voltages (Code No. **260**)..... **$105.00**



10" SAW

10" Portable Electric Saw

A popular large-size unit for work requiring greater depth of cut than provided in other units.

Specifications

Diameter saw blade . . . 10"; Spindle diameter . . . 1⅜"
Depth of cut (adjustable) . . . 3½"; Overall length . . . 28"
No load saw speed...2000 R.P.M.; Full load...1300 R.P.M.
Net weight . . . 33¾ lbs.; Shipping weight . . . 59 lbs.
Standard Equipment—3-conductor cable with plug (3rd wire for grounding); adjustable saw table; detachable ripping fence; one 10" combination rip and crosscut saw blade and one 10" crosscut blade; one carrying case.

Price, complete for all voltages (Code No. **101**)..... **$180.00**

Standard Voltage for all Saws listed above—110; also available for 220 or 250 volts. Universal Motors, Operate on A.C. or D.C.

See page 53 for complete listing of Saw Blades, etc.

Portable Electric Hammers

COMPLETELY self-contained units operated by universal motors and requiring no transformers, rectifiers or other extra equipment. Greatly speed up any drilling or cutting operations requiring a hammer action.

In the No. 30, 32 and 34 Hammers the action is developed by an oscillating weight and spring assembly, the weight driven indirectly by a crank. The motor is mounted at right angles to the barrel and operates through a train of reducing gears.

The action in these units is characterized by a definite "follow-through" stroke, producing a high ratio of efficiency. The units are well balanced, compact, and light in weight.

In the No. 6 Hammer, the action is developed by opposed counter weights rotating at high speed and a ram striking the anvil with rapid, sharp blows. This action is especially adapted to heavy concrete and stone drilling. The motor drive is in direct line. The entire mechanism operates in a bath of oil. A perforated barrel-sleeve dissipates any heat from the barrel.

Drilling and channeling in concrete, stone or brick. Removing form marks from concrete surfaces. Caulking joints and seams in tanks, pipe lines, etc. Removing scale in boilers, tanks, etc.

Installing signs, fixtures, theatre seats, etc. Tamping molds and concrete forms; vibrating concrete forms for smooth finish.

Gouging and shaping wood beams, timbers, etc. Cleaning cavities, gouging and channeling in tree surgery.

NO. 30 HAMMER

No. 30 Portable Electric Hammer

Capacity in concrete or brick . . . ½".
Number of blows per minute . . . 2,700.
Weight: Net . . . 5¾ lbs.; Shipping . . . 18 lbs.
Overall length . . . 12⅞".
Standard Equipment—No. 0 Chuck-Turning Wrench with Dust-shield; one ½" star-drill; 3-conductor cable and plug (3rd wire for grounding); rocker type switch; tool retaining spring; drift key, carrying case and can of oil.

Price, complete for all voltages (Code No. 102) **$85.00**

NO. 32 HAMMER

No. 32 Portable Electric Hammer

Capacity in concrete or brick . . . ¾".
Number of blows per minute . . . 2,500.
Weight: Net . . . 9¾ lbs.; Shipping . . . 22 lbs.
Overall length . . . 14⅝".
Standard Equipment—No. 0 Chuck-Turning Wrench with Dust-shield; one ⅝" star-drill; 3-conductor cable and plug (3rd wire for grounding); trigger switch; tool retaining spring; drift key; carrying case and can of oil.

Price, complete for all voltages (Code No. 103) **$115.00**

NO. 34 HAMMER

No. 34 Portable Electric Hammer

Capacity in concrete or brick . . . 1⅛".
Number of blows per minute . . . 2,300.
Weight: Net . . . 17 lbs.; Shipping . . . 30 lbs.
Overall length . . . 17¾".
Standard Equipment—Nos. 1 and 2 Chuck-Turning Wrenches with Dust-shield; one 1" star-drill; 3-conductor cable and plug (3rd wire for grounding); trigger switch; tool retaining spring; drift key; carrying case and can of oil.

Price, complete for all voltages (Code No. 104) **$145.00**

NO. 6 HAMMER

No. 6 Portable Electric Hammer

Capacity in concrete or brick . . . 1½".
Number of blows per minute . . . 2,900.
Weight: Net . . . 23 lbs.; Shipping . . . 42 lbs.
Overall length . . . 20¾".
Standard Equipment—Nos. 2 and 3 Chuck-Turning Wrenches with Dust-shield; one 1½" star-drill; 3-conductor cable and plug (3rd wire for grounding); trigger switch; tool retaining spring; drift key; carrying case and can of oil.

Price, complete for all voltages (Code No. 105) **$195.00**

All units have universal motors, operating on A.C. or D.C.
Standard Voltage—110; also available for 220 or 250 volts.

See Page 53 for complete List of Hammer Tools and Accessories.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Saw Blades

100-Tooth Crosscut Saw (Fig. 1)

For fast cross-cutting. Makes smoother cut than forty-tooth saw.

Cat. No.	Diam.	Price
20359	5″	$3.75
11732	6″	4.00
19773	7″	4.50
11843*	8″	5.50
11868	10″	7.50

Planer or Mitre Saw (Fig. 3)

For making very smooth cuts, both rip and crosscut. Used for interior finish and trim.

Cat. No.	Diam.	Price
20358	5″	$5.75
11942	6″	7.50
20362	7″	7.00
11945*	8″	9.50
11948	10″	12.00

Nail Cutting Saw

For opening up boxes and crates and ripping up floors, where lots of nails are encountered.

Cat. No.	Diam.	Price
20356	5″	$6.00
20360	7″	7.00

Compo-Board & Wall Board Saw (For No. 35 Saw Only)

Cat. No.	Diam.	Price
20363	5″	$5.25

Rip and Crosscut Saw (Fig. 2)

A particularly fast blade for ripping in all kinds of wood, and can also be used for cross-cutting.

Cat. No.	Diam.	Price
20268	5″	$3.75
11520	6″	4.00
19774	7″	4.50
11701*	8″	5.50
11867	10″	7.50

Metal Cutting Saw (Fig. 4) (For Non-Ferrous Metals Only)

Designed for cutting soft, light gauge, non-ferrous metals. Has very fine teeth, filed straight across the face.

Cat. No.	Diam.	Price
20357	5″	$4.50
11943	6″	4.00
20361	7″	5.00
11946	8″	6.00

Abrasive Disc (Fig. 5)

This disc is used for sawing and cutting slate, marble, asbestos, tile, Transite, and porcelain.

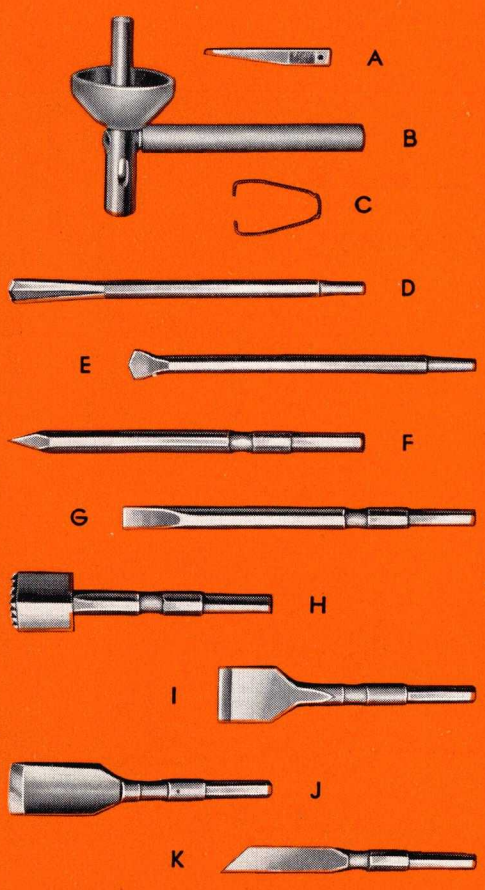
Cat. No.	Size	Price
20368	5″x⅛″	$1.50
11944	6″x⅛″	1.75
19766	7″x⅛″	2.00
11947	8″x⅛″	2.25

* 8″ and 10″ blades have same diameter hole. 8″ blade can be used on 10″ Saw.

Hammer Tools

Star Drills (Fig. D)

Dia. and Length	Price Each	In Box of 5 Each	Dia. and Length	Price Each	In Box of 5 Each	Dia. and Length	Price Each	In Box of 5 Each
¼″x 5″	$1.00	$0.75	15/16″x 9″	$1.50	$1.25	¾″x24″	$3.25	$2.60
5/16″x 5″	1.00	.75	1″ x 9″	1.50	1.25	⅞″x16″	2.50	1.95
⅜″x 5″	1.00	.80	1⅛″x12″	2.25	1.75	⅞″x24″	3.50	2.75
7/16″x 5″	1.15	.85	1¼″x12″	2.50	2.00	1″ x16″	2.50	2.00
½″x 9″	1.15	.95	1⅜″x12″	2.75	2.25	1″ x24″	3.50	2.80
9/16″x 9″	1.15	.95	1½″x12″	3.00	2.50	1⅛″x24″	3.75	3.25
⅝″x 9″	1.30	1.00	1¾″x12″	3.50	3.00	1¼″x24″	4.00	3.50
11/16″x 9″	1.30	1.05	2″ x12″	4.00	3.50	1⅜″x24″	4.25	3.75
¾″x 9″	1.30	1.10	½″x16″	2.00	1.60	1½″x24″	4.50	4.00
13/16″x 9″	1.50	1.20	⅝″x16″	2.25	1.70	1¾″x24″	5.00	4.50
⅞″x 9″	1.50	1.20	¾″x16″	2.25	1.80	2″ x24″	5.50	5.00



Diamond Points (Fig. E)

Dia. and Length	Price, Each	In Box of 5 Each	Dia. and Length	Price, Each	In Box of 5 Each
¼″x5″	$1.00	$0.75	½″x9″	$1.15	.95
5/16″x5″	1.00	.75	9/16″x9″	1.15	.95
⅜″x5″	1.00	.80	⅝″x9″	1.30	1.00
7/16″x5″	1.15	.85			

Cat. No.	Item and Size	Price
7095	¾″ Chipping (cold) Chisel, 9″ long, for Nos. 4, 34 and 6 Hammers (Fig. G)	$1.75
	In Box of five, each	1.50
9405	¾″ Chipping (cold) Chisel, 20″ long, for Nos. 4, 34 and 6 Hammers (Fig. G)	3.00
	In Box of five, each	2.50
11108	⅝″ Chipping (cold) Chisel, 8″ long, for No. 30, 32 Hammer (Fig. G)	1.50
9036	¾″ Bull Point, 12″ long, for Nos. 4, 34 and 6 Hammers (Fig. F)	2.25
	In Box of five, each	2.00
9410	¾″ Bull Point, 24″ long, for Nos. 4, 34 and 6 Hammers (Fig. F)	4.25
	In Box of five, each	3.50
17802	No. 0 Star Drill Chuck (¼″-¾″) for Nos. 2, 30 and 32 Hammers (Fig. B—without Dust shield)*	3.85
17804	No. 1 Star Drill Chuck (¼″-¾″) for Nos. 4, 34 and 6 Hammers (Fig. B—without Dust shield)*	3.85
17805	No. 2 Star Drill Chuck (13/16″-1¼″) for Nos. 4, 34 and 6 Hammers (Fig. B—without Dust shield)*	5.00
17806	No. 3 Star Drill Chuck (1⅜″ up) for Nos. 4, 34 and 6 Hammers (Fig. B—without Dust shield)*	6.00
17746	Dust-shield for Nos. 0 and 1 Star Drill Chucks	.35
17747	Dust-shield for Nos. 2 and 3 Star Drill Chucks	.35
7276	Drift Key (Fig. A)	.55
9037	Wood Gouge (Fig. J) for Nos. 4, 34 and 6 Hammers	6.60
12446	Scaling Chisel, 1¼″ wide for Nos. 2, 30 and 32 Hammers (In lots of 5, $1.65 each)	1.90
17314	Scaling Chisel, 1½″ wide, for Nos. 2, 30 and 32 Hammers	2.25
17315	Scaling Chisel, 2″ wide, for Nos. 2, 30 and 32 Hammers	2.50
12401	Scaling Chisel, for Nos. 4 and 34 Hammers (In lots of 5, $2.20 each)	2.75
7267	Chisel Blank (8″ long) for Nos. 4, 34 and 6	1.25
9039	Flat Wood Chisel (Fig. I) for Nos. 4, 34 and 6 Hammers	4.40
17738	Flat Wood Chisel for Nos. 2, 30 and 32 Hammers	3.75
9040	Bush Tool (Fig. H) for Nos. 4, 34 and 6 Hammers	6.60
9035	Seam Tool (Fig. K) for Nos. 4, 34 and 6 Hammers	3.00
17232	Seam Tool for Nos. 2, 30 and 32 Hammers	2.75
10909	Tool Retaining Spring (Fig. C) for Nos. 2, 30 and 32	.25
10337	Tool Retaining Spring, for No. 4, Types A, AB	.25
10336	Tool Retaining Spring, for No. 4 (Types B, BB), Nos. 34 and 6 Hammers	.25

*For use with Star drills and Diamond Points only.

BLACK & DECKER

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High Cycle Tools

In addition to the Universal tools for use on standard A.C. or D.C. current, Black & Decker also manufacture a complete line of High Cycle Tools, operating on a 3-phase, 180 cycle current, to meet the severe demands of heavy mass production operations. Write for new catalog of complete High Cycle line, including Drills, Reamers, Screw-Drivers, Grinders and Abrasive Tools.

ALL PRICES SHOWN IN THIS CATALOG ARE NET PRICES TO THE USER. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Black & Decker Tools and Accessories, as listed in this catalog, are sold through and carried in stock by leading automotive, hardware, electrical, plumbing, machinery and mill supply jobbers throughout the world. Jobber distribution means more convenient and efficient service to you. Patronize your jobber. Write us for the names of Black & Decker jobbers in your vicinity.

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HEAT GUN

VALVE SHOP

VALVE REFACERS

VALVE SEAT GRINDER

VALVE LAPPER

BENCH GRINDERS

DIE GRINDERS

PORTABLE GRINDERS

SANDERS

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VACUUM CLEANER

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SAWS

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TOWSON, MARYLAND

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